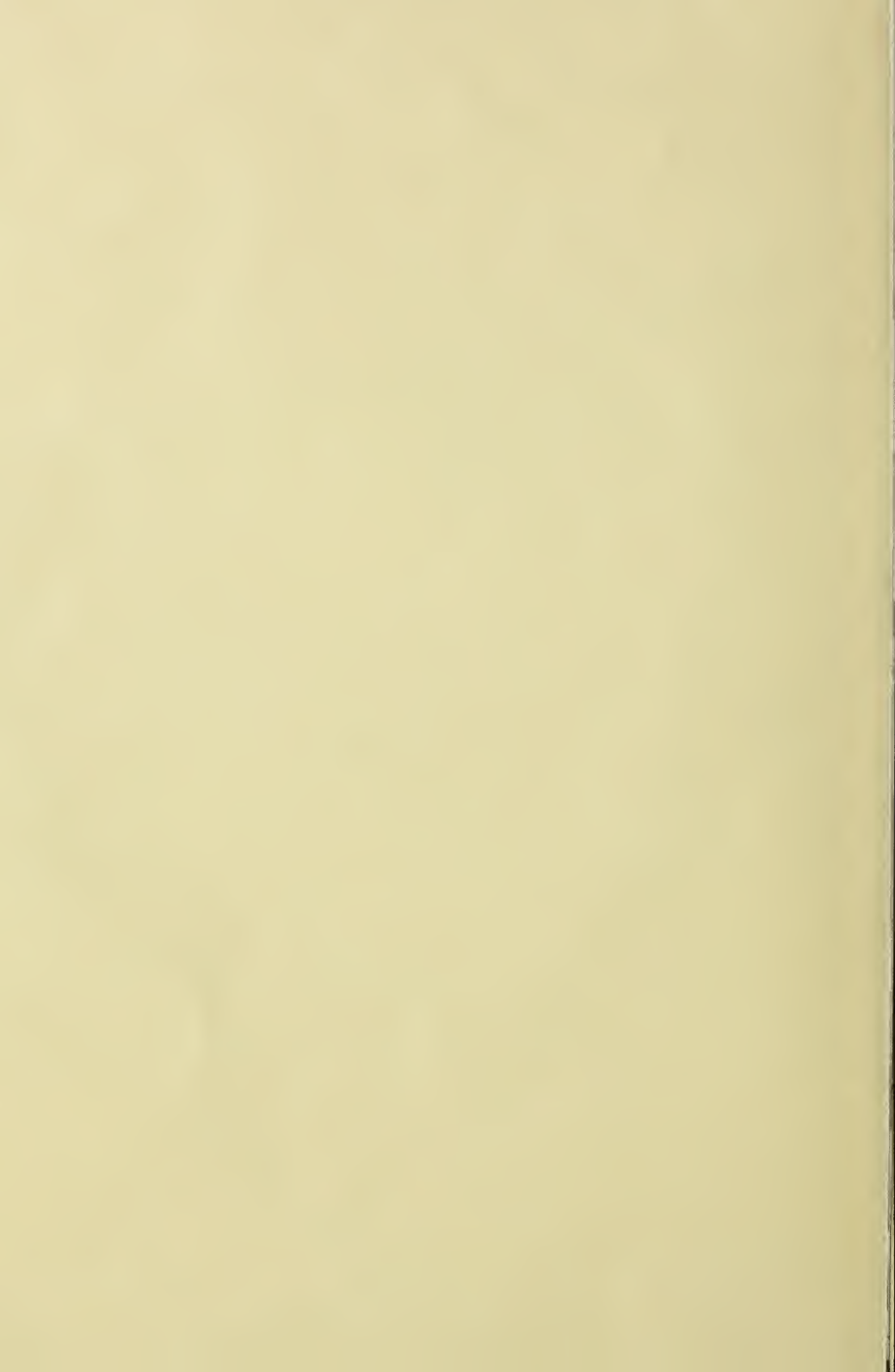


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THE

MARYLAND FARMER:

DEVOTED TO

Agriculture, Horticulture, and Rural Economy.

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For the Maryland Farmer.

The Sugar Cane Region and its Advantages.

(Concluded from page 92.)

BY AUGUSTINE J. SMITH.
Baltimore, Md.

The Parish of St. Mary is the cream of the sugar producing section of Louisiana, and together with St. Martin, Vermillion and LaFayette, which lie contiguously north, constitute what is known as the Attakapas region of the State, long since famous for its natural beauty and fertility of soil.

During the period of slavery its productiveness attracted the attention of the enterprising agriculturalist, and not only ready cash but future crops were pledged to the merchant princes of New Orleans, wherewith to purchase the never overstocked labor, which was fast converting its rich alluvials into an agricultural El Dorado.

It is not surprising then, that under such conditions, the war between the States should have scattered its financial wrecks all over this fair land, and by its sweeping and destructive reconstruction plunged both merchant prince and planter into a common abyss of ruin. And yet strange to say, I know of no portion of the South which has so rapidly recuperated. Indeed, in a financial and industrial respect, this country is already on the threshold of a career not only eclipsing its ante-war record, but promising in the not far distant future to develop a material prosperity unexampled.

The influx of Eastern and Western enterprise, coincident with the introduction of new and highly improved methods of manufacturing the saccharine product, added to the widely awakened energies of the native population, including many of the old planters, have co-operated to bring

about a reconstruction of the appliances which constitute a sugar plantation, noticeable in the comfortable and substantial improvements, which on every hand, are substituting the too unsightly fossils of the old regime. When you add to these the influence which railroads and telegraphs infuse, you have the energizing power which is destined to build up an empire of wealth and social power with few rivals on this broad continent.

This country is almost a fac-simile of our Eastern Shore of Maryland—the garden spot of the Middle States. Like to that favored region, navigable streams or bayous traverse its interior in every direction, thus placing the floating carrier at the door of almost every plantation, and the surrounding bays, and the gulf, like our Chesapeake, accommodate those on the coast edge. Besides these, the Louisiana and Texas railroad, built within the past year, passes longitudinally through it, thus providing ample and easy transportation to New Orleans at one terminus, and its thrifty neighbor, Texas, at the other, which is fast becoming a valuable customer for its saccharine product.

While the changes wrought by the late war to this section are apparent in the beneficial results already accomplished, as well as the promising extraordinary development which will ultimately crown the triumphs of free labor, yet it is sad to recur to the ante-war condition and to behold the terrific desolation wrought to both races in the breaking up of the homes, the ties, and the long established plantation economy, with its simple and artless pleasures, in order to introduce the new system. To describe this country as it was in the old slave times would require the pen of an artist. Imagine if you please, a beautiful, crystal stream, the bayou Teche coursing its serpentine way

for more than one hundred miles through rich alluvial lands, its banks skirted with the magnificent live oak, whose huge and vigorous trunks support the far reaching arms, which in every direction spring from their gnarled and rugged bosom, their branches of living green, clad in the prolific moss, whose pendant, festooned shapes, look as if the fairies in their joyous flight on some grand gala day, had decked them with their tresses clipped in honor of their Queen. Embosomed in the cluster of stately evergreens which adorn the well tended lawns, are the unostentatious, and in some instances, palatial dwellings of those whose possessions would make a prince, and yet whose gentle mien bespeaks the genial, kindly soul beneath, which would put the generous peasant heart to blush. Beneath that roof, refined and cultured minds and hearts made up the homes, from which to their inmates and to the humble cabins, went forth the kindly sympathies which soothed the toil and sweetened the joys that daily came to all.

Thus, in epitome, you have the old plantation life, which, with all its serious objections, was yet a school for the race of Ham, where Providentially ordained guardians taught industry and virtue, and which, despite the costless sympathy of drawing room philanthropists expended to make the institution odious, was yet a wise provision for advancing through the Divine law of labor, an unfortunate race up to the plane of a high and beneficent civilization. And whatever be the verdict of narrow minds and hearts, the philosophic historian will see, not only the agency of the self-sacrificing master, but the hand of Divinity in an institution which thrived and rejoiced under the industrial union of cotton and slavery, by which the master was enriched in money, and the slave in all that exchanged his slough of heathenism and degradation for a civilization, a home, and a God.

History furnishes no parallel to the heroic valor which the Southern man displayed in defence of the institution, which inheritance, and law, and social safety had imposed upon him, against what he had conceived to be an interference devoid of philanthropy or love. But even this was eclipsed in moral grandeur by the manliness, fortitude and sublime resignation with which he, with bitter memories of his slain, kept the oath which sheathed his sword at Appo-

nattox, and saw lands and houses, and all but honor go down before the storm. Still more wonderful perhaps was the patience and endurance with which he adapted himself to the terrific and trying edicts which made his slave his peer, and in many instances his master, and through it all with hopeful faith and courage, made his bread and meat, and raiment, and yet could lend a generous help to the new-born citizen to fit him for his too soon acquired prize.

While the besom of war swept this fair land in every direction, yet few evidences remain of the conflict except its heroes—these meet you everywhere in the busy struggle of life. Besides those that remained to defend their homes, thousands joined their comrades in other portions of the Confederacy, and the names of many of them that fill a hero's grave in the valley of the Shenandoah, and on the bloody fields of the Potomac that make Virginia historic ground, will be found among those that made the names of Lee and Jackson immortal, as under Dick Taylor, Hays, Nichols, Deblanc, Mouton and the fiery Wheat, they marched like heroes into the jaws of death.

The name Attakapas given to this region of Louisiana, means Man-Eater, owing to a tradition that cannibals inhabited it in olden times. But whatever be its legendary antecedents in this or other respects, there is enough reality embraced in its geology and wonderful physical features, as well as its well authenticated history of French and Spanish dominion to furnish food for the pen and brush of the artist who cares not to explore the realm of mere fancy for a romance. Longfellow in one of his most beautiful productions, has made his hero, Gabrielle, wander through its streams and bays, its groves and forests of Magnolia, with their perfumed bowers, in search of his loved Evangeline, to lose her at last in the labyrinthine mazes of its wilderness of beauty.

French and Spanish story are full of the tale of woes and sufferings which refugees from Canada and San Domingo encountered in flying from persecution on the one hand, and insurrection on the other, and of the joyous reunion of families and lovers who having parted as if forever in times of sudden peril, found themselves unexpectedly re-united in this fair land of the Don and the Gaul, so soon to become the possession of the liberty loving American, by bill of

sale, from the most illustrious descendant of the Cæsars.

Even after American occupation, the unexplored and almost impenetrable jungles of this inland sea of tortuous water ways and bayous, was the haunt and rendezvous of pirates and freebooters, and there are now living some who stood face to face with the notorious Lafitte, whose nefarious exploits signalized the daring and adventurous life which early in this century held dominion in the Gulf of Mexico.

But as the strong arm of practical civilization is uprooting all the primitive landmarks, through the transforming power of utility, so is the remorseless hand of commerce fast robbing this land of its poetry and making it the slave of the denizen of trade. Where, within the memory of those now living, stood the primeval forests and prairies, are now to be seen the well tilled fields of living green with all the appliances which constitute a well equipped plantation, while the smoking chimneys mark the spot where the golden juices of the cane are converted into those saccharine crystals, which at one time, simply a luxury for the rich, have become not only a necessity to all classes, but an element of wealth and power to the State and the country.

In alluding to the geology of this country I ought to mention the existence of inexhaustible deposits of sulphur, and an island of pure rock salt, which was fortunately discovered during the late war and supplied the South-western portion of the Confederacy with that indispensable necessity. Eastern enterprise is trying to make this deposit profitable by cutting and deepening the water ways and channel to navigable depth—the want of easy and cheap transportation being the only drawback to its becoming immensely valuable.

I must not omit to mention the mammoth shipping interest, representing millions of outlay, established at Morgan city, in this parish, by the late Charles Morgan of New York, one of the most remarkable men of this enterprising age. A railroad eighty miles long, constructed by him, connects New Orleans with Morgan city. From the latter point, splendid iron steamships radiate to various gulf ports on the coast of Texas and Mexico, becoming the floating carriers for passengers and the immense amount of freight which finds its exit at the ports of Galveston, Clinton, Indianola, Corpus

Christi and Vera Cruz. This freight, after reaching New Orleans is distributed North, East and West, as well as to Europe. Until recently these ships did pretty much all the carrying trade of Texas and Mexico, but the railway system traversing the State in every direction has raised up rivals in St. Louis and other commercial centres which compete actively with New Orleans for this valuable business.

The chief representative of Western enterprise in this country is John B. Lyon, the great grain operator of Chicago, who enjoys here, as there, a wide reputation for enterprise, liberality and commercial honor.

Others from the same section, namely, Daniel Thompson and Charles H. Walker, have developed valuable planting interests here. Add to these Clark & Mills, and Fous & Barnett, of Ohio, C. W. Wills, of Illinois, H. C. Walker and David Thompson, of New York, together with the native planting element of this region, as for instance, John Pharr, the Argus-eyed colossus of vim and working power. Dr. Saunders, Zenor, Todd, Foster, Berwick, Silan, Bosweth, Duperrier, Patout, Burguerries and William F. Weeks, of Grand Cote Island, and you have a sample of the progressive intelligence and energy which is fast building up the valuable industrial interests of this country.

But you will exclaim, halt, and so I will, with the hope that your readers will not grow weary under the perusal of this, my first contribution to your valuable journal.

FRANKLIN, LA., Jan. 30, 1881.

A sugar beet factory, at Franklin, Norfolk Co., began operations last autumn. The mill has cost \$125,000, and has been more than a year in building. Its machinery was imported from Germany, and an experienced sugar maker from the same country is employed to manage the business. An American, who has gained a thorough knowledge of the process as conducted in European factories, has been engaged as an assistant superintendent. About one hundred hands are employed, working night and day. The beets used in this factory are raised mostly in Norfolk and Plymouth counties, and a considerable quantity, as far away as the Connecticut river valley.

Farm Work for April.

April, as its name indicates, is the opening month for nearly all the operations connected with farm life. Not a day is now to be lost. The past winter has been so severe that much Spring work has been necessarily prevented from being done, and the April of this year finds the farmer behind in much of his work that should have been done. Fencing should be put in good order, and the fields intended for cultivation should be drained if they have not been before this. Manure ought to be hauled out and spread thickly. Do not try to spread it over too great a surface, as is too generally the practice. Concentrate the manure and use enough on an acre to make it rich, so that not only a heavy crop will be produced, but the land be improved when the crop has been taken off. It is poor economy to spread manure merely in the hope that the crop alone will be increased partially by the laborious process.

OATS AND BARLEY.

Oats can yet be sown on good soil with some expectation of a fair crop. Sow barley early in the month. Observe what we said of oats and barley in the February and March numbers of the Farmer.

TOBACCO.

To those who have been unfortunate in losing their plants by the fly, let us advise you to try the plan of Mr. Perry, set forth in our journal last year. Prepare beds six or eight feet wide, and as long as you please or as many short ones as you choose, surround them with planks 1 foot or 14 inches high, and cover with cotton on rollers, the cotton to be saturated with oil and as a cover for the plants in stormy, cold weather, or when the nights are frosty. As soon as the plants appear give them a watering of liquid manure. Water them as often as necessary, with water as warm as summer rain water. In a week give another liquid manure dressing, and repeat the same in a few days thereafter. Thin them as they grow by repeated rakings with the "tobacco rake." The liquid manure is made by taking a bushel of fresh stable manure and putting it in a flour or plaster barrel, fill the barrel with water, and after standing a day or two, use the liquid by means of a watering pot with a nozzle with large holes.

Should the liquid be very strong, which is judged by the darkness of its color, reduce its strength with water. The younger

the plants the weaker should be the solution. If your beds in the woods be troubled with the fly, or you apprehend its attack, spread broad-cast over them a mixture of well rotted, finely comminuted stable manure, in which is mixed flour of sulphur and soot. We also recommend highly, sowing thickly, so as to cover the plants, tobacco dust with a little plaster mixed. This tobacco dust can be had very cheap, from the tobacco factories in this city. This dust is a certain, stimulating fertilizer for the plants, and we believe will prove an effectual remedy against the fly. Try it at least. Neither of these hints if put in practice would cost much in money, time or labor, and can do no harm, and might be the means of saving a whole, or nearly a whole crop. Why hesitate?

STOCK OF ALL KINDS.

First, see that the working horses and oxen are in good order and well fed, groomed, have a plentiful supply of pure water, are decently housed and bedded, that they may be better prepared to endure the hard labor they will be daily called on to perform now, when the crops are being put in, and afterwards, in cultivating the same during the intensely hot and exhausting weather.

POULTRY AND OTHER OUT-HOUSES.

It is an old saying, "cleanliness is next to Godliness," and it is an accepted truism that cleanliness and neatness is essential to good farming and to health, therefore it behooves every man who wishes to be neat and at the same time to do all he can to promote the health of his family, to clean up the out-houses and the debris laying about, and haul it out as manure, or compost it for future use, and at the same time beautify his place by using whitewash or other colored wash on his buildings and fences about his homestead.

ORCHARDS AND ORNAMENTAL TREES.

Plant fruit trees and ornamental trees, that your children's children, and all future owners of your lands may bless your memories. Fruit trees are necessary to the health and comfort of a family, and is half their living if the fruit be properly managed, and ornamental or forest trees give grateful shade, add to the beauty and intrinsic worth of the farm and will repay the outlay in wood or timber, if they do nothing else.

CORN.

Prepare the ground for the corn crop by deep plowing if the soil is naturally good.

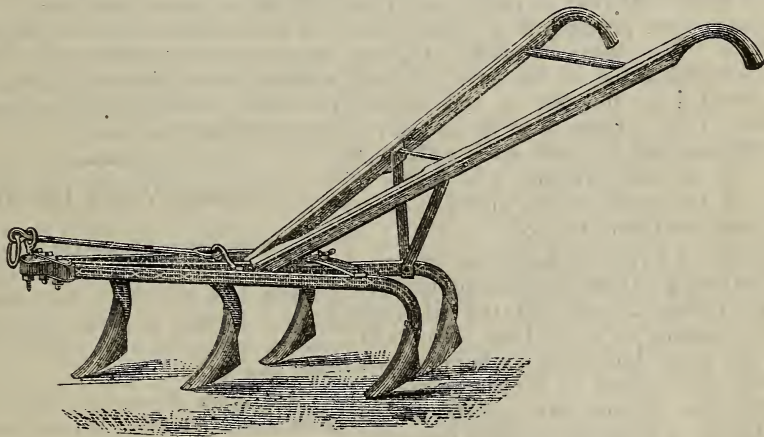
If rather poor, plow shallow,, bringing up only an inch or two of the poorer subsoil, but subsoil each furrow deep, and as soon as plowed harrow well with the smoothing harrow. If you have stable manure, well rotted, plow it in after it has been heavily spread over the turf. Stable manure is the best fertilizer you can use for corn. unless it be ashes. A good dressing of stable manure we call forty two-horse wagon loads to the acre. If you can get ashes, broadcast one hundred bushels to the acre, after the first harrowing of the land.

As to the growing of corn we will give our experience of years, which has been confirmed by many experiments made by careful men in various sections of the country.

First, the land must be naturally good or made rich by manure, or highly fertilized with prepared fertilizers that contain ele-

Do not be stingy in either manure or fertilizers, or in even the use of both, for the corn plant is a great gormandizer. It utilizes all that is coarse or fine that is at all suitable for its food.

The land should be well plowed, have a deep, mellow bed for the roots. The chief working of the ground ought to be before the corn is planted. When it is in fine tilth and ready for planting, lay it off in checks four feet by four, and put six or eight grains in the check, cover it with the hoe two inches deep, and pat it with the back of the hoe. Or use a good corn planter which will drop the grains six to ten inches apart in the drill, the drills being four feet apart. If the corn be planted by a drill, it should be thinned to one stalk every sixteen inches apart in the drill. If planted in the old way in checks, the corn should be thinned out so as to leave two stalks in each hill.



WHITMAN'S IMPROVED IRON FRAME CULTIVATOR.

ments on which the plant delights to feed, or which we find to be in large quantity in the grain and in the ashes of the stalk and leaves. These are chiefly silica, phosphoric acid, magnesia and potash. If the soil contains these in abundance, the other ingredients are likely to be there, such as soda and the acids. But, as few farmers are experts in agricultural chemistry or can analyze their soils, we think it best that a bountiful supply of stable manure be applied, if it is to be had, to any land intended for corn, as stable manure where the animals have been fed on rich food, grain, hay, or oil cake has all the requisites for a corn crop. But if no stable manure, then use such a fertilizer as has the essential requisites of food suitable to the corn plant.

As soon as the corn is planted either way, sow two bushels of plaster (gypsum,) and four bushels of salt mixed together over each acre. This will drive off the cut worm and give a fine start to the growth of the corn when it comes up. Run a Thomas, or other smoothing harrow over it every week, first one way, then across and diagonally, until the corn is six inches high. This harrowing kills all grass and weeds as fast as they spring up, and keeps the land light. Then thin as before mentioned. Now use the cultivator every ten days, going as near the corn as possible. If possible use the hoe to work closer about the plants, and to destroy any grass between the plants or in the plant hills. At this working with the hoe, beans or

pumpkins may be planted, and they will bear good crops without materially affecting the growth or yield of the corn.

We give a cut of the cultivator now so popular, and the best we have ever seen, all things considered.

We would never use a plow in corn culture, only the harrow and cultivator, as level culture is certainly the best for corn in all places except where water is likely to lay, and in such places when the corn was worked for the last time, we would run a plow deep in the centre of each row to drain off the surplus water.

As soon as the corn begins to show signs of tasselling, stop working, and if the season is dry, sow broadcast two bushels of plaster per acre, over it, for the purpose of attracting moisture from the atmosphere.

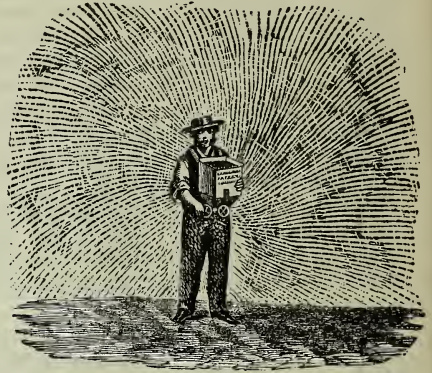
Scientists attempt to show that corn is apt to prove infertile at times, and that it requires root pruning if it grows too luxuriant. We think no stalks of good corn will be infertile or barren if it is not too crowded in the hill or too thickly planted. Give it room to grow and to receive the sun and air and every stalk will bear. As to root pruning, it is bosh; it wants all the roots it can make to draw water and food from the soil.

To grow a large product from an acre, we must have good seed, sound and healthy. There are yearly, many sorts offered in the market claiming to be the best. No doubt many are good, but many are humbugs, or at least only suited to certain localities. We write this for our own and the southern latitude, in speaking of these distances for planting we allude to the tall sorts of the South. There is a corn called the "Mammoth" that has yielded enormous crops—150 bushels shelled corn or thereabout. It often has five or six large ears to the stalk. The New York Rural speaks highly of it. We think our farmers should try various sorts each year, until they secure a kind that suits their soil and suits themselves and then begin to raise a PEDIGREE corn for themselves. As to saving the fodder, cutting off and securing the crop and saving the seed-corn, we reserve our views until the proper season for such work arrives.

SOWING GRASS SEEDS, &c.

Those who have grass seeds or small grain to sow broadcast, ought to possess a

"CAHOON HAND BROADCAST SOWER." It is the cheapest, lowest priced, and in our opinion, the best hand sower in the market for GRASS SEED.



It sows wheat, oats, hemp, barley, rye, buckwheat, grass, seed, &c.

The operator carries it suspended by a strap over his shoulder, and at a common walking gait, sows from four to eight acres per hour. It is a perfect success. Every farmer should have one.

Garden Work for April.

All who desire to have a good garden to supply all the vegetables needed for the comfort and health of the family, will not delay a moment in preparing the same and sowing the varieties of seeds proper to be sown this month.

Asparagus Beds.—If you have none, plant a bed at once. If you have one, rake it over and take off all litter, spread a coat of well rotted manure and fork it in, then rake smooth and top dress the bed with a heavy coating of salt.

Cabbage Plants and Seed.—If you have plants large enough set them out. Sow seeds of early sorts, and Winningstadt cabbage seed for early fall use.

Cauliflower and Broccoli.—Sow in a rich, open border seeds of these delicious vegetables for autumn use.

Hot Beds.—Attend closely to the hot-beds, and give all the air possible with all the moisture needed.

Siberian Kale.—If not sown last month sow a bed now. Sprinkle the seed thinly over a rich well prepared bed, and roll or tramp with the feet. The Kale will soon start and need no further cultivation.

Peas.—Sow a few rows every ten days. Or sow early and late peas at the same time, and they will follow in succession. Alpha and Champion of England, or some marrow pea can now be sown and will follow successively, and are among the best for family use.

Beans.—Plant a few rows of snap or dwarf beans every week during the month. The Valentine and the Black Wax are the best.

Corn.—Plant some early sweet corn for roasting ears. There may be some earlier sorts, but the pure, shrivelled looking sweet corn is best for table use early. The best of all is Hyde's Improved Egyptian, but it is rather a late sort.

Celery.—Sow celery seed in an open border somewhat protected from the mid-day sun, and as the plants grow to four inches high, transplant to another spot so as to make them stocky and have good bunches of roots, before they are set out for cultivation for winter supply.

Carrots, Parsnips and Salsify.—Sow seeds of these for the chief crop.

Beets.—Sow seeds for succession. Of course, some have been sown last month. The Egyptian and the Blood Turnip Beet are the best for early supplies. Have plenty of beets, they are wholesome and always relished by vegetable eaters.

Onions.—Sow onions for pickling and for use. Set out onion setts of different sorts. Put out plenty for they are always useful and meet ready sale in the markets. The red onion grows large from the seed, if not left too thick. The Portugal is milder and grows to a good size. The Silver Skin is the most popular and best for family, though they are not as good keepers as other sorts. The Weathersfield red onion keeps well and is a great producer on strong rich soil. In growing onions from seed or setts, mistakes are often made in their culture. If from seeds, they should be thinned to two or three inches apart in the rows; if for pickling, they should be left much closer so as not to grow too large. The rows are usually about 14 inches apart. In New England, we have seen onions growing very thickly, and piled almost one above another, of large size, but the land was rich and although naturally stiff, by proper comminution was as friable as an ash bank. A light alluvial soil suits this popular vegetable best. Onion setts should be planted or rather

pressed into the ground, two inches apart, and the bulbs never covered with earth. The ground kept light by frequent raking or hoeing, until they nearly reach maturity.

Lettuce.—Set out plants and sow more seed. There are many new sorts, Try some of them, but rely upon the old sorts like the black seeded Dutch, and India curled, for early summer, and Roman Coss, for late summer.

Spinach.—Sow spinach and a plentiful quantity, for it is a choice vegetable. It requires very rich land and frequent culture, to yield well and be satisfactory, but well repays for these conditions. Sow in rows a foot apart, and thin out as it grows, to three inches apart in the rows. The thinings are not lost, as they can be cooked like the young beets that are thinned out, and too often thrown away.

Potatoes.—Plant potatoes for late use. Try some of the newer kinds and perhaps you may strike a bonanza.

Rhubarb or Pie Plant.—It is not too late to plant out roots of this delicacy for dessert.

Small Fruits and Dwarf Trees.—Attend to these, prune and trim off all dead wood, loosen the soil about the roots and supply lime or manure if needed.

Strawberries.—If not done before, clean off the beds, work and manure the plants, and mulch with leaves or corn-stalks, cut straw or any substance which will keep the dirt from the fruit and retain the moisture. If a dry time comes use water freely and the increased size and value of the fruit will well repay all your trouble. In watering when the plants are in flower, do not pour on the water so as to wash out their fertilizing properties, but let the nozzle of the water pot be kept low to the ground.

Herbs.—Herbs of all kinds can be transplanted, and seeds can be sown in small beds, to be transplanted in July, or as soon as the plants are large enough. Sow thyme, sage, savory, &c., now, and in July, transplant to give each plant room, and in September the crop will be large and in bloom when it can be cut for drying. No small industries are more remunerative than growing these indispensable herb plants and properly preparing them for market. The labor and skill required in the growing of herbs, whether medicinal or culinary herbs, is comparatively nothing, and the drying and preparation for marketing is also trifling. It is suitable work for children

and decrepid old people, and yet it pays remarkably, an acre of herbs is worth as much as will support an old man or woman.

Every gardener should have besides the common tools in use, a good seed drill, Dutch hoe, fork spade, dibble, syringe, garden shears, fruit gatherer and different sized watering pots.

For the Maryland Farmer.

Making, Saving and Using Manure.

The success of every farmer depends in large measure on his skill in making, his care in saving, and his wisdom in using manure. Every available source of plant food is worthy of his attention. If a measure of success has been attained in spite of neglected means of fertility, how much greater would it have been, had all been turned to good account.

The great art of the farmer is to make everything available that can contribute to the fertility of his land; and he, who would be most successful, must keep such a vigilant watch as to let nothing go to waste that can in any way enrich his land.

All vegetable substances are decomposed by a fermenting process which prepares them to be food for a new growth, which, in its turn, goes through the process of decay, and so furnishes a continued succession. What is wanting in the earth is supplied from the air; and if the new product is all buried in the soil, the fertility is increased by so much as the buried plant has drawn from the chemical elements of fertility in the atmosphere. Peas, clover and rye are favorites for this purpose. It has been ascertained by careful analysis that a ton of green rye, in the condition it is usually plowed under, contains about the same elements of fertility as a ton of good stable manure. If the various plants be left to mature before being buried, the fermentation and decay will be much slower, but the results will be more valuable. The mineral portions of plants are represented in the ashes they make when burned, rarely equalling one-tenth of their weight, which shows how very small a portion is purely of the earth, earthy.

A complete manure has all the elements desired for its purpose, and in the right proportions. Whether it will be profitable for a farmer to use commercial fertilizers will depend on their meeting his wants at

paying prices, and his ability to use them understandingly. For instance, if superphosphate is used on land recently treated with lime, the two may so combine as to form the insoluble phosphate of lime, and the want of good effects becomes discouraging.

Every farmer who succeeds will learn to rely mainly on the manure he makes on the farm from the compost heap, and the animal excrements from the stable and barnyard, the piggery and poultry yard, not neglecting the family privy.

From all these sources half the farmers of the land are realizing but a part of what they might. I have seen a stable so arranged that the urine would leach through the floor into a stone heap, except the little absorbed by the droppings; and these were left till they would make a load before they were thrown from the stable. And this was done by a man, who prided himself on his farming. His privy never had an absorbent put under it, except the little earth it received after the annual cleaning out. Instead of a compost heap to rot his corn-stalks they were burned to get them out of the way. But he saved his ashes and got all he could buy from his neighbors, and that paid him well. I have seen a pig-sty where the swine were kept on a raised floor, without an absorbent and no chance even to root. The most of the farms I have seen, impress me with a great lack of appreciation of the value of the liquid excrements, which should always be saved with the solid evacuation. The urine of a cow will saturate a bulk of dry earth, larger than the dung she drops and worth more as a fertilizer. Nature provides for the combination of the solid and liquid in the excrement of fowls, and the value of this manure is great.

I have been demonstrating for a number of years the utility of saving all the urine and combining it with the droppings. My method is to keep dry earth in the barn, where I can easily throw it under the stock. As it becomes saturated I throw it into a small reservoir, with the droppings, whence all is removed to the place where wanted. The chamber slops are generally added in the process to increase the richness. With proper care, I find my horse or cow make a good wheel-barrow load a day, which I generally apply as made, and so economize labor.

By this method I have so rapidly increased the productiveness of the land as to attract a large share of attention to my farm improvements; and I hope have made myself a benefactor. I have certainly made two blades of grass grow where one grew before. I act on the old idea that what is worth doing at all, is worth doing as well as I can do it, and so I succeed.

W. W. MEECH.

For the Maryland Farmer.

The Cultivation of Corn.

There are in different sections of the country some variations in the manner of proceeding in the culture of corn, and yet so far as the main principles are concerned there can be no great variance. All must agree that in order to obtain a good crop that the soil must be fertile, or rendered so by the application of manure, it must be in good condition to receive the seed, and the after cultivation sufficient to keep it free from weeds, and the corn plants growing. So then the points of variance must be upon questions of minor importance, such as the best kind of soil, whether sod or old fields; whether the plowing should be in the fall or in the spring; whether deep or shallow; whether manure should be plowed in or harrowed in upon the surface; whether manure or special fertilizers should be used in the hill, &c., &c.

Now it makes probably no great difference how these questions are settled, it is not expected that all will agree, for the reason that conditions of soil and climate render it necessary that different courses should be pursued, the same as constitutional conditions render the effects of the same medicine very unlike in different individuals. And because farmers do not agree in all particulars is no evidence that one is right, and therefore the other wrong. Now there may be cases where in one kind of soil it would be desirable to plant corn upon a sod well turned over. This will be seen to be very desirable if the season is very wet, because then the soil being held by the roots of the grass keeps the soil looser and therefore better adapted to the penetration of the roots, than a field that has been cultivated and has no undecayed vegetable matter to support it; but on the other hand suppose the season is a very dry one, then

the turned up soil resting upon the grass roots is more susceptible to the forces of evaporation and so becomes dry to the injury of the crop, if not to the prevention of its coming up. It is no uncommon thing for these conditions to occur, hence the foolishness of setting up any claim of superiority in that direction.

Then again, with regard to plowing in the fall or spring; if plowing is done in the fall, and the ground becomes frozen or covered somewhat with snow, so that the wind may not carry away the fine dry particles that become detached from the general mass, then, there is no doubt but that the fall plowing serves an excellent purpose; but suppose, as is frequently the case, there is gentle freezing and thawing throughout the winter, with considerable wind, the result will be that a considerable portion of the finer part of the soil will be lost by being blown away, so that here again, no arbitrary rule can be fixed that will be safe to follow at all times.

Still again, with regard to deep or shallow plowing, very much depends upon the character of the soil; one kind of soil would not bear deep plowing, while another would, or that question might be affected by the weather. Deep plowing might be practiced and because the season was wet, a crop secured that would have been good if the plowing had been shallow, or the reverse, and yet, under such circumstances, a farmer would not like to be considered unqualified for his occupation because of the same, nor would he feel satisfied at having his mode of proceeding ridiculed. The same points might be considered with regard to the application of manure. Any farmer would be looked upon as very foolish to plow his manure down into the soil if the season was to be one of continual wet, because the tendency of its virtue would be downward, away from the roots of the plants, while the reverse would be true if the season was one of continued drouth.

Farmers are obliged to meet a great variety of conditions, and those too that cannot be anticipated as to be provided for, and for that reason he should not be regarded unkindly by those of other occupations because of occasional failures, for with all the drawback and variable conditions that he has to contend with, there are less absolute failures among farmers than any

other class of operatives. There are comparatively few who really make farming a business, but that make a good living and respond to the necessary calls for assistance from other classes. W. H. YEOMANS.

Columbia, Conn.

Manure and Plant Fertilization.

We are indebted to the Utica Weekly Herald for the following abstracts of proceedings of the Central New York Farmer's Club, held in February last.

"The discussion of the regular question

MANURES AND THEIR APPLICATION

was opened by David Gray, who related some very interesting experience concerning his own farm. He applies barnyard manure near the surface on sandy soil, but on clay soil, deeper in. On clay it must be plowed in lower. He too, thought that farmers should make their own super-phosphate, which should not be brought too near seed corn or any other grain, as it would be apt to destroy germination. He recommended strongly the use of ashes, especially on potatoes. He thought well of the Crocker phosphate, but stable manure he believed to be the best of all. If a sufficient quantity was not obtainable it should be supplemented by fertilizers.

"Daniel Batchelor read a paper on the subject. He showed that manuring originally meant the same as: "manual labor." He explained how soil was formed and illustrated how little was taken from the soil by the plants, by the example of burning a large tree and getting from it only a few pecks of ashes. The three great essentials to fertility in our soil, he said, are phosphorus, potash and nitrogen, and these three are constantly going away in the shape of milk, cheese, butter, beef, pork, mutton, bones, hides, hay, straw, hops, grain, potatoes, etc., for which the farmer gets money in return. In the direction of the barn yard drainings he sends away the same precious fertilizing materials in amber streams down to the ditches, the brooks, the rivers, and off to the ocean, and for these he gets no returns. They pass away in silence and unnoticed, but they carry away his dollars just as surely as the quietly accumulating interest on a mortgage. In both directions, the market and the exposed

manure heap, the land is depleted. Not but there are lands so rich in phosphates, potash and long accumulated stores of nitrogen, that they will stand centuries of cropping and yet produce well. And then, too, there is ever going on in the soil a process of unlocking by natural solvents, of the elements of fertility; also an accumulation of nitrogen, by absorption. I suppose that the heavy snow which now covers the whole Northern States, will add an immense amount of ammonia and consequent nitrogen to the land. Mr. Lawes has shown that he can raise about sixteen bushels of wheat per acre, on land which has not been manured in thirty years past, but the same land adjoining and manured, produces forty bushels to the acre. Mr. L. B. Root, of Monroe county, in this State, asserted quite recently, that for over fifty years the wheat lands there seemed to be inexhaustible. A little vegetable matter in the shape of a green crop, plowed in was all the land required to make it produce from forty to fifty bushels of wheat to the acre. This condition continued till about the year 1854. After that period the crops began to fail, and a mixed husbandry was resorted to, in the hope that the wheat crop would be thereby increased but no such result followed. On the contrary, the crop continued to weaken in the straw and to fall off in grain, till twenty bushels to the acre was all that could be obtained. About six years ago, Mr. Root began to apply super-phosphate to his land, and has continued to do so ever since in moderate quantities. The result was, and is, that his crop began to increase, and now his returns are sixty bushels to the acre. Looking at the results, Mr. Root was fully justified in saying "it was evident that the phosphoric acid was exhausted from the land by over half a century of wheat growing." Agricultural experience the world over, shows that this indispensable element of fertility, phosphoric acid, is the most readily exhausted from farm lands, nor will the most careful saving of barn yard manure compensate for the loss, for, as already stated, it goes away in every product sold from the farm. And yet no man should go blindly to work and scatter super-phosphate profusely on his lands. On all clay loams and soils on clay bottoms there are inert phosphates, which only require deep tiliage, sub-soiling and proper

counmunication to unlock the fertility. Shallow culture will never make available the locked phosphates in a clayey sub-soil. Moderate sub-soiling, by bringing up a little, year after year, and letti ig the elements act as a solvent, is the way to liberate the phosphate. There are, too, on many farms deposits of muck, which if drawn out and piled with alternations of quick-lime, would add immensely to the fertility of sandy and gravelly lands. Muck dried is an excellent absorbent for urine and all wet stable droppings. Professor Killebrew, Commissioner of Agriculture, for Tennessee, asserts that 2 lbs. of washing soda, sal soda, added to 100 lbs. of muck, will produce a mass as valuable as cow dung. This looks rather empirical and I am not disposed to give it full credence. Yet, I have no doubt but the muck would be improved by the process. My method would be to draw out the muck and lime it, as before stated, and let it lay for a season, then add about 1 lb. of crude potash, dissolved, to about 100 lbs. of the composted muck, before applying to the land."

Dr. Wight then read a paper on, "*The value of Manure is dependent upon the kinds of Stock Food,*" he said:

"I apprehend that farmers seldom sufficiently consider the difference in the value of the manure resulting from different kinds of stock food. It strikes me that before expending much money in purchasing commercial fertilizers, stock feeders had better consider the propriety of feeding more freely of those kinds of food that will enrich their barnyard manure. The policy of such a course seems more urgent, when we reflect that at the present prices of artificial fertilizers, every ton of fair barn-yard manure is worth at least three dollars. Not that we should feed purposely to produce manure, but as is an admitted fact that the oil cakes, shorts and clover hay are excellent feed for certain purposes, why not combine their values both for feeding and manurial purposes. If the manure from a ton of cotton seed meal is worth as much as nine tons of good common barn-yard manure and nearly as much as a ton of super-phosphates, would it not be well for us to kill two birds with one stone, by using more of this concentrated feed? The analysis heretofore referred to, also shows the great importance of preserving the liquid as well as the solid

portion of the manure. Modern farmers are getting to save this in various ways.

"One method is by having a tight drop behind the cows, in which is placed a quantity of dry muck, horse manure, sawdust and other absorbent. Another method is to construct a tank underneath the iron grating on which the cows stand, to receive both the solid and liquid manure, occasionally throwing over the contents some absorbent, and removing them as often as occasion may demand. Another, and probably better method is the construction of manure cellars, where both liquids and solids may be collected together and then mixed with whatever comparting absorbent is most convenient, and the whole may be removed at the convenience of the farmer. When such receptacles are properly constructed, there need be no detriment incurred by the rising of offensive effluvia or otherwise.

A mixture in such cellar, of horse, cow, sheep, swine and other manure, as well as muck, leaves, humus, and refuse of all kinds is of great utility. After having learned the value and necessity of applying the three heretofore mentioned substances as food for plants, I own, to some surprise at being informed by the highest authorities, that every ton of ordinary surface soil holds much more of every one of these three ingredients than a ton of manure. The necessity of the application of nitrogen, potash and phosphate of lime seems to be explained only on the ground that these substances, which are already in the soil, are for the most part so locked up, chemically, as to be nearly inert. Thorough pulverization, the application of small quantities of their fertilizers, and sometimes by the application of some substances not strictly called manure, or direct plant food, such as lime, salt, plaster, etc., tend to release, unlock and render soluble and available than fertilizing substances already in the soil. Dr. Voekler analyzed the dry earth of common soil, and found it to contain 62 pounds of nitrogen and 36 pounds of phosphoric acid per ton. Other analysis of soils have shown potash enough already in the soil to produce 250 bushels of potatoes yearly, for 100 years, and phosphoric acid enough to produce 30 bushels of wheat, per acre, annually for 200 years. Prof. Johnson analyzed a soil which contained 4652 pounds of nitrogen per acre,

in one foot of surface soil, and yet only 63 pounds was available. The same principle holds true, and to a still greater extent, in regard to the tricalcic phosphoric acid. Notwithstanding all these scientific facts, we find that the application of 80 pounds of available nitrogen, will frequently add 15 to 25 bushels of wheat per acre. And we all know the great benefit we are constantly deriving from the application of 10 or 15 tons of good barn-yard manure per acre, containing probably more than 100 pounds each, of nitrogen and phosphoric acid, and perhaps 60 pounds of potash."

History of the Maryland Agricultural and Mechanical Association.

CHAPTER XXVIII.

October 29th, 1860, being the day fixed for the Annual Meeting of the Society, the President, John Merryman, Esq., called the meeting to order and addressed the Society at length, we here give a portion of his remarks:

"I congratulate the Society upon the auspicious opening of the Thirteenth Annual Exhibition. Never, within my knowledge of the Society, has there been shown more hearty good will on the part of the farmers generally than now. In our history the year of 1860 must always be an epoch, second only to the year of our origin. By the favorable action of the last Legislature upon our petition for relief, your Executive committee were placed in a condition to pay ninety per cent. of the indebtedness of the Society, a debt looked upon by most of our creditors until then as valueless; and I am willing to hazard the opinion, that before the term of your present officers expires every dollar of debt will have been cancelled, and a cash balance be on hand for our successors to begin with. A full financial statement will be made in the report of the Executive committee, which will be read to you to-morrow night.

"I regret, gentlemen, that an arrangement looking to the location of the Fair Grounds at Canton, fell through at the last moment. A location upon the harbor of Baltimore, and near the line of one of the great railroad routes, and at one of the

contemplated termini of another, and skirted by the City Passenger Railway, presented means of access heretofore unknown to this Society. No exhibition can be a great success financially without ample public conveyance at small cost.

We owe at least our thanks to the liberal owners, for their tender of the free use of twenty-five acres of land for five years. They were Mr. J. H. Pleasants, President of the Cauton Company, Messrs. Miles White and W. W. Glenn."

At this meeting, upon invitation, B. P. Johnson, Esq., Secretary of the New York State Agricultural Society, addressed the meeting upon the progress of Agriculture.

M. Tilghman Goldsborough, Esq., from the committee appointed for the selection of subjects for discussion at the meetings of the Society, reported as follows:

The subject in order for discussion on Tuesday evening shall be—The Economy of Concentrated Manures.

On Wednesday evening—The number of crosses that should entitle an animal to compete as a full bred.

On Thursday evening—Tobacco Culture considered as a judicious substitute for Wheat when the latter may become unprofitable because of insect enemies.

On 30th October, the President after the reports of the judges on stock, etc. had been read and accepted, called Col. Oden Bowie to the chair, who announced that the subject for discussion this evening was the use of Concentrated Manures, and called on Jas. T. Earle, Esq., of Queen Anne's, to present to the Society the result of his experience and observation, to which he responded.

Mr. Earle made a very interesting address, and was followed by Mr. E. D. K. Richardson, of Cecil, Col. Ramsay McHenry, of Harford, and Dr. Jno. Wharton, of the Maryland Agriculture College.—Those gentlemen generally favored the use of concentrated manures upon lands, but as to the particular kinds and quantities to be used there seemed a diversity of opinion. Dr. Wharton spoke of some interesting experiments which were now being tried at the College, the result of which he would be able to state accurately in a short time.

Mr. Johnson, of New York was again

called upon by the President, who said that his remarks last night were so interesting that no doubt the Society would be glad to hear from him again, upon the subject of agricultural education. Mr. Johnson showed that with all that had been done by science, it was self-evident that nature had been shown to be the best chemist, by the means of grass elaborated by the cattle. He alluded to the importance of agricultural education, and hoped to see the day when intelligent young men, educated suitably for the purpose, would be scattered broadcast over the land, carrying that intelligence into every quarter of the country. Mr. Johnson also made a most eloquent appeal in behalf of agricultural education, and especially of the Maryland College, which was received with evident marks of appreciation by the Society.

The President resumed his seat, and introduced to the Society, Mr. Haldeman, President of the Pennsylvania State Agricultural Society, who remarked that he had been rather inveigled here by the President of this Society—but whilst he was among farmers he could not forbear giving his testimony in behalf of the improvement of our lands. He said that the farmer must rely on his own farm resources for success—that concentrated manures alone, or lime alone, would not do, unless aided with home made manures—and showed that the high price of the land in his State was produced by this course of action. He said that the Maryland farmers had far greater advantages over many who owned those valuable farms of his own State, by their contiguity to market, and only needed to use the means at their command to bring their lands up to the same high standard which his own (York,) and Lancaster county had reached.

Mr. Ramsay McHenry moved a vote of thanks to Mr. Haldeman, for his very instructive remarks. Mr. Oden Bowie moved to amend by adding the name of B. P. Johnson, Esq., of New York, which was concurred in, and the motion was then unanimously adopted.

The next evening, October 31st, after some routine business, Dr. S. P. Smith, of Alleghany county, moved that the discussion of the subject Concentrated Manures be resumed, and called on Mr. Dick, of Montgomery, for the result of his experi-

ence. Mr. Dick responded at length, and among other things, said:

He placed great stress on the value of bone dust and Columbian guano, but remarked that they would not pay the first year, but the effects of the application would be witnessed for years afterwards, more especially was this the case with the bone dust.

Mr. M. T. Goldsborough, of Talbot county, was next called upon, and made some remarks upon the value of the Drill for sowing guano with the wheat. Mr. G. had given this subject much attention, and his remarks were listened to with deep interest. In regard to the use of Peruvian guano in his experience, the result of the harvest seldom coincided with the expectations formed of the crop whilst growing—that the manipulated guano was decidedly the most profitable, especially if sown by the drill, which he thinks the most preferable way for its use.

The President announced to the meeting that Mr. Tucker, Jr., of the "*Country Gentleman*," was present and called upon him to give his views upon the subject under discussion. Mr. T., in response to the call remarked, that from what had just been elicited from Mr. Dick and others, it was evident that in this State, we were better posted in regard to the use of concentrated manures than they were in his section, but he presented to the meeting some interesting statements gathered from his travels in England and elsewhere, which were received with much satisfaction.

For the Maryland Farmer.

Sorghum, Sugar and Syrup.

BY DAWSON LAWRENCE.

Having already written at length on this question through the columns of your magazine, and the same having been copied in other papers, among them my own county paper, the *Ellicott City Times*, I do not feel like giving up the question under adverse criticism urged against the sorghum cane as a sugar producing plant.

I hail with satisfaction any thing bearing upon this important matter, for, or against the sugar qualities of sorghum cane. If the matter is *for* the plant, it must necessarily be on account of some trial of its

qualities; if *against*, we have a right to ask the conditions of the trial, and if there are insuperable objections, it proves that, so far as that variety of cane, or that mill, or that process, or that section is concerned, there is a failure, and there is no need to repeat the trial *under those conditions*. We are trying to settle this question for this section. Can we, (profitably of course), raise our own syrup or sugar or both from sorghum cane? The answer of this question in the affirmative would be followed by another: can we make any money by raising the cane for sale; either in the cane to local mills, or by selling the syrup to refineries after expressing and evaporating the juice by a farm or local mill; or by selling the home-made sugar?

It is a very simple question, and by the steps which we in our section have taken, we are likely to settle it for our section.

Brighton Grange, Montgomery county, Md., No. 60, has had a committee investigating this question for several months, and at its last meeting sent a special messenger (at the request of the Department of Agriculture) as the result of correspondence to Commissioner LeDuc at Washington to confer with him in regard to the details of the experiment. It is believed some cane will be planted, say 20 acres in Montgomery and Howard counties, this spring.

I was led to take up my pen again on this question by seeing the following paragraph in the able and interesting article of Augustine J. Smith, of your city, in the March number of your journal on "Sugar Cane Culture and Sugar Manipulation:" "And while the sorghum plant may answer the purpose of supplying the farmer with molasses, and perhaps sugar of a low grade, sufficient for his own use, from labor snatched from ordinary farm work, yet the product will be inferior to that of the sugar cane, and under no circumstances would be a competitor, nor be made profitable as an independent enterprise."

These are bold thrusts at exactly what we are trying to do and which he declares we cannot do,—we are trying to get sugar from sorghum for our own use, and to sell of "a better grade than we buy," and also to make it profitable as an independent enterprise.

If this is not practicable, why did Commissioner LeDuc state that by 1884, we

should probably 'terminate our dependence on foreign nations for this article,' sugar? (Note: see Preliminary Reports Department of Agriculture, 1880.)

The reports which rolled into the Department from various parts of the country, showed the sorghum cane sugar business to be so healthy that the Commissioner was forced to the above conclusion. Possibly the encouraging condition also of the beet sugar industry had its bearing on the question, but as previously stated in your columns and for reasons there given, I look to sorghum cane and not to the sugar beet as the source of Maryland's domestic supply of sugar.

In the Report I have alluded to, there are reports from over one thousand experimenters or rather raisers of sorghum for syrup and sugar from Alabama, Arkansas, California, Connecticut, Rhode Island, Dakota Territory, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Texas, Utah, Virginia, West Virginia and Wisconsin. The yield is from 2 gallons per acre, all the way along to 30, 50, 100, 200, 250, 320, up to 480. The 2 gallon case appears to be an extreme one but I give it as showing possibilities.

In all the reports I noticed but one complaint after running my eye carelessly down the columns of remarks, there is one of "poor quality;" the others speak of the syrup as "fine," "first-class," "No. 1," "the best ever seen here," "no green taste," "sells readily as Louisiana cane," "equal to New Orleans molasses. The syrup is quoted as worth from 30 cents to \$1.25 per gallon, and the sugar at over 16 cents per pound and down to 9 and 10. Not much sugar has been made owing to the absence of facilities, but numbers express their intention to make sugar in 1881.

And the object of the letters I have written to your magazine is to induce Maryland to do likewise.

BONEDUST is highly appreciated by the English as a fertilizer. They import large quantities of bones from Australia, and whatever substance contains phosphate is earnestly sought for enriching the soil.

For the Maryland Farmer.

What our Lands Need.

How important it is for the farmer to know just what his lands need, is apparent from the remarks of Mr. Lawes, in a letter received from him in speaking of plaster, he says; "although so successful in some parts of the States, it is useless in England," and I may add the same regarding my own land, never having seen the least effect after a fair trial in every field, and I know many have told me the same thing, yet a large per centage of the phosphates sold to farmers consists of plaster or sulphate of lime which is formed during the process of manufacturing, for of the thousands of tons of vitriol or sulphuric acid used, there is no other base to form a salt but lime, hence, every one using a soluble phosphate is at the same time, using a large percentage of plaster, which, in many cases is of no more use than so much sand. Mr. Lawes advises 100 lbs. of nitrate of soda to be sowed to the acre in the spring. I will do so this season. I am somewhat surprised at another remark of Mr. Lawes, regarding the growth of clover in England. He says they can only grow it once in ten or twelve years. I have never heard of this trouble in Kent county, on the contrary, know that it grows every three or four years, wherever the soil is in any good condition, and especially where there has been a dressing of manure. I pity the farmer who cannot get clover, for without it or its equivalent, there is a poor chance to improve worn out land.

It is true, turning under any green crop that grows, will no doubt, improve the soil but clover will do a double duty, furnish food to make manure, and with a good second growth turned under, put new life in the dead soil as every practical farmer well knows. Black eye peas have been used with much success in the South, according to some writers, and it is a wonder some of our farmers do not try it on their worn out tobacco lands, so much of which can be found in our Western Shore counties. A good crop of peas turned under, I am sure would give a better crop of wheat than nine out of ten of the fertilizers sold them.

The following result I copy verbatim from Mr. Lawes' last experiment, in his own hand-writing, being the twenty-ninth crop of barley on the same spot.

BUSHELS PER ACRE.

- | | | | |
|------------------------------|-----|-----|-----|
| 1. Superphosphate of lime | 25½ | 55½ | 61 |
| 2. Potash soda magnesia | 23½ | 35 | 68½ |
| 3. Superphosphate with No. 2 | 30 | 54½ | 59 |

The first column gives the produce by means of mineral manure alone.

The second, the mineral with salts of ammonia.

The third, with mineral and nitrate of soda.

It will be observed that the nitrate of soda gave the best results, but in neither case was any organic matter used. I have no fight with him on inorganic matter, except that I prefer obtaining the nitrogen in the same manner the soda got it, from the atmosphere.

In his same note he informs me that, although the barley crop was a success, the wheat crop was an entire failure, although I presume the same applications were made on both. I regret he did not give the quantities used so I could see what the nitrogen cost. A. P. S.

Rock Hall, Kent Co., Md.

N. B.—Since the above was written, a note from Mr. Lawes states that 275 lbs. of nitrate of soda was used to the acre, and as this would cost us at least fifteen dollars, it is plain to see would not justify its application in the States as Mr. L. justly remarks in his note.

The largest sugar producer in Louisiana made, last year, on 3200 acres, 6,480,000 pounds of sugar, and 7,290 barrels of molasses, for which he received over half a million of dollars. The largest wheat raiser in the world, Dalrymple of the northern Red River country, raised a crop of wheat which sold for \$450,000, but it took 23,000 acres of land to raise it on, nearly six times as much as was required to raise the sugar and molasses.

A correspondent of the *Ohio Farmer* says that he has found by experience that six Cotswold sheep will consume no more food than a cow, and are more profitable. For a lamb of this breed, weighing 125 pounds, \$5.50 is obtained. He estimates that six ewes will produce eight lambs per annum, and fifty pounds of wool.

For the Maryland Farmer.

The Hop Disease.

The Society of the agriculturalists of the "Nord" have devoted one of their last sittings to the study of a disease which is working destruction on the hop yards in a great number of localities in the north of France, in Belgium and England.

This malady appears in the form of a little white mustiness which spreads abundantly on the hops, reaching little by little the top of the vines and destroying completely the "cones," viz., the essential part of the plant.

Mr. Ladureau, Director of the Agromonic Station of the "Nord," has undertaken the study of that disease.

He believes that it owes its origin to a little insect, a real phyloxera vastatrix of the hop, and that the white mouldiness is but a chaplet of eggs of that insect.

In England, the hop raisers have used against the disease as a remedy, POWDERING VINES WITH SULPHUR—which seems to have given satisfactory results.

We call on the facts the attention of the scientists, who will do a real service to the farmers by seeking an effectual means of destroying this redoubtable insect, or at least preventing the extension of its ravages. From the Paris "Le Technologiste," of November, 1880, and translated by B. M.

Commercial Manures.

If we are to judge by the increase in the business of our leading concentrated fertilizer firms, the use of these fertilizers must in the main, give satisfaction. On this subject we wish all of our readers were familiar with the careful and long continued experiments of Dr. Lawes, of Rothamsted, England. True, England is not America. But land there, as here, must supply plant food or crops must fail. Dr. Lawes' experiments show that concentrated fertilizers *do supply* to the soil what plants remove in a condition available as food. A circular before us from the Bowker Fertilizer Company, of Boston and New York, gives an illustration of the growing demand for commercial manures in this country. The business was commenced in 1873, when fifty tons were sold. Last year 15,000 tons were manufactured and sold by this firm alone. As a rule, the value of commercial fertilizers cannot be ascertained in one sea-

son. Yet in favorable seasons their effects are oft times very manifest.

It is evident that to render tests of any positive value the soil must be uniform, and an unmanured plot must be cultivated and planted precisely in the same way as the manured plot. Until farmers are willing to put themselves to this trouble, they can never arrive at trustworthy conclusions.—*Rural New Yorker.*

The Cow Pea.

The cow pea is worthy of being introduced to every farmer. Its value as an article of food for man and beast, the large crops of fodder (bushy vine) it produces, its adaptation to the lightest and poorest soils, and its usefulness as a green manurial crop, place it far above many other plants that are grown to its exclusion. It has no enemies among the insects, and is in that particular free from damage. A heavy crop of it will so completely cover the ground that not even a ray of sunshine can enter, and it is often necessary to pass over the vines with a heavy roller in order to get them plowed under. From twenty to forty bushels of the peas are usually produced to an acre, and if they have been well manured previous to seeding, the crop of hay will be very large. One of the most important advantages the pea confers on land is the shading it gives, some experienced farmers contending that by this method it rather improves the soil than injures it. A small outlay will enable any one to try the cow pea, and those who have not grown it should do so.

The cow pea, though called a pea, is properly a bean. It will grow on soil that scarcely produces anything, but is, however, sensible to the effects of good manuring, and rewards the farmer for such treatment with bountiful yields. It is indigenous to the Middle States and the South, preferring a warm season and dry soil. There are a great many varieties of it, the most prolific being the Crowder, but the "black eyed" is preferred for the table.

As a renovator of the soil, next to clover, it has no equal. Growing with a heavy, dense foliage, plowed under just at the period of blossoming, it makes a splendid green manure, rotting quickly and producing lasting effects. It can be grown for this purpose on land that will not produce

clover, and that is a very important item. On inferior land that has had a crop of cow peas turned under, if a light sprinkling of lime is added, a venture may safely be made with clover the following year. It is planted about the same time with corn. It can be sown for hay, but care must be taken in harvesting it properly. If allowed to get too ripe the leaves will crumble off after it is stowed away in the loft; but if cut when in full blossom, or just as the young pods begin to form, and then cured like ordinary hay, it will keep well all the winter. Cows eat it with relish, and for sheep, nothing is equal to it—they eat it up clean, being very fond of it. The seeds are more nutritious than our ordinary white bean, stock preferring it when cooked, to corn or meal, while calves are raised on them with ease when it is desirable to wean early. For the table they are cooked not only when dry, but also when green, being a favorite dish on Virginia and Carolina tables. There is a prejudice against it on the part of those not familiar with it on account of the dark color it takes when cooked; but if the nutritious qualities of the pea were fully known, no difficulty would be experienced in making it a staple article of food.—*Philadelphia Recorder*.

SOILS are divided into three classes—surface soil, sub-soil and hard pan. The surface soil is the upper portion and that which is turned by the plow; in fact, the soil that interests the farmer most. The sub-soil is below the surface soil, more compact, and often of a different color. Sometimes the line between the surface and sub soil is quite distinct, but generally not. Hard pan is a still harder layer than the sub-soil and lying below it. This hard stratum may be but a short distance below the surface, while in other places is not to be found. It is a very hard soil, or one that is approaching the nature and texture of rock.—*Ex.*

Messrs. Whitman & Burrell, of Little Falls, N. Y., who have tested ensilage upon a large scale, are convinced that 400 tons of good ensilage obtained from 16 acres of rich land, is equal to 150 tons of good hay obtained from four or five times as many acres.—*Ex.*

Sales of Imported Stock.

We learn from Messrs. Smiths & Powell, of Syracuse, New York, that they have recently made the following sales.

To Messrs. Whitman & Burrell, Little Falls, N. Y., the imported two year old Holstein heifers, Lucretia Mott, Matchless (898), yearling bull Vicar Knight and imported Cipse Queen's heifer calf. To D. H. Burrell, Esq., two year old heifers Orange Gul (860) and Finesse 2nd (561). To J. H. Ives, Esq., of Little Falls, two year old heifer Undine (913). To E. J. Burrell, Esq., two year old heifers Octoroon (916), Coral (907), and a heifer calf from imported Clothilde. To E. B. Ward, Esq., Detroit, Mich., the elegant imported Clydesdale stallion 'Perfection' (1499); Clydesdale mares, Middy Morgan, Molly Bawn, Madam Christy and Highland Girl and imported Holstein cow Mabell (371), and yearling bull Ingomar. To George Stilson Livingston Co., Ill., yearling bull Vicar. To Messrs. Dye & Stillwell, Troy, Ohio, the Holstein cow Imogenia (333) which made a 2 years old record of 47½ pounds in a day and the past season about 11,000 pounds in a little over 11 months; the imported cow Finesse (298) with a record of 49½ pounds in a day and 1366½ pound in a month and 10,330½ pounds in 10 months and 23 days. The imported two year old heifer Gazelle (312) which gives promise of being a remarkable milker. the imported yearling heifer Lone (844); the yearling heifers Music (565) and Junata 2nd (562); the heifer calves Neilson 2nd, Finesse 3rd, Leonine and the bull calf St. Elmo, weighing at 10 months 900 pounds, an elegant animal and suitable in all respects to head such a herd as Messrs. Dye & Stillwell are founding.

MORE FINE STOCK IMPORTED.—Mr. H. Burleigh, of the firm of Burleigh & Bodwell, of Fairfield Centre and Hollowell, Maine, who last year made extensive importations from England, have lately purchased and will soon ship to this country a large lot of the highest pedigreed Hereford cattle and 100 choice Shropshire sheep, and have added to these, eleven superior specimens of polled Angus cattle. Of the latter, the English "Chamber of Agriculture Journal" thus speaks:

"His selection of the polled Angus breed consists of two heifers and two young bulls from the herd of Sir George Macpherson Grant, Bart, M. P., Ballindalloch Castle, N. B.; one cow and calf from the herd of Mr. Alex. Smith; also one cow and calf from the herd of Mr. Robertson, Mr. W. M. Skinner also furnishes one, fine two year old heifer from the Drummin herd, while Mr. John Grant, Advie, supplies him with two beautiful yearling heifers, which concludes his purchases of this truly valuable breed of cattle thus far.

"We think we can truly say that there has never been a finer or better selection of this splendid breed made by any one for exportation, and we predict a prosperous future for them in their new pastures, believing that Mr. Burleigh will on his next visit to these shores, purchase a much greater number of them."

MARYLAND FARMER

A STANDARD MAGAZINE,

DEVOTED TO

Agriculture, Horticulture and Rural Economy.

EZRA WHITMAN, Editor,

COL. W. W. W. BOWIE, Associate Editor,

141 WEST PRATT STREET,

BALTIMORE, MD.

BALTIMORE, APRIL 1st, 1881.

TERMS OF SUBSCRIPTION

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TO ADVERTISERS!

The large circulation of the Maryland Farmer makes it one of the best mediums for advertisers of all classes. Its circulation will be largely increased by our reduction in the Subscription Price, and hence add to its advantages as a medium for advertisers. The terms of advertising will remain as heretofore.

THE MARYLAND FARMER is now read by more Farmers, Planters, Merchants, Mechanics and others interested in Agriculture, than any other magazine which circulates in the Middle or Southern States, and therefore is the best medium for advertisers who desire to extend their sales in this territory.

☞ We call attention to our Reduction in Price of Subscription.

TERMS.

One Copy, one year in advance,	\$ 1 00
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Subscription Price for One Year, if not paid in advance, will be at the old rate, \$1.50 per year, and positively no deduction.

SPECIAL PREMIUMS

For those who may Canvass for New Subscribers.

Any person who sends us 100 Subscribers, at \$1.00, will receive the world-renowned Howe Sewing Machine, with all the latest improvements. Value, \$50.00.

Any person who sends us 80 Subscribers, at \$1.00 each, will receive 1 Young America Corn and Cob Mill, worth \$40.00.

Any person who sends us 50 Subscribers, at \$1.00 each, will receive 1 of the celebrated Wheat Fans, which has taken nearly 200 premiums. Value, \$28.00.

Any person who sends us 25 Subscribers, at \$1.00 each, will receive a Roland Plow. Value, \$12.00.

Any person who sends us 15 Subscribers, at \$1.00 each, will receive a Farm Bell. Value, \$6.00.

Any person who sends us 6 Subscribers, at \$1.00 each, will receive a Nickel-Plated Revolver, Long Fluted Cylinder. Value \$2.50.

THESE ARTICLES WE WARRANT TO BE FIRST-CLASS.

☞ It will not be necessary to secure the subscribers all at one time. For instance, if any one wants the Mill we offer for 80 new subscribers, he can send the names in any number he chooses, and we will allow him a whole year to finish the club.

☞ COL. D. S. CURTIS, of Washington, D. C., is authorized to act as Correspondent and Agent to receive subscriptions and advertisements for the MARYLAND FARMER, in the District of Columbia Maryland and Virginia.

☞ Our friends can do us a good turn by mentioning the MARYLAND FARMER to their neighbors, and suggesting to them to subscribe for it.

Works of Art—Free.*With the Maryland Farmer for 1881.*

Any new subscriber who sends \$1.50 will receive the MARYLAND FARMER for one year and his choice of either one of the splendid pictures as advertised in this number with miniature wood cuts, which however, give only a poor idea of the beauty of the engravings in the new style of art, which far surpass any chrome as objects of art. Any person sending \$2.00 will get the Farmer and both pictures as advertised. This liberal offer is also extended to every old subscriber who pays up his arrears and adds thereto 50 cents for one picture, or one dollar for the two.

Some want to know how we can afford to furnish our subscribers, for fifty cents, a picture intrinsically worth and sells in the market for \$2.00. *The reason why we can thus furnish Works really worth \$2 per copy is easily explained.* We save you about the following customary commissions and expenses: 75 cents to the Retail, and 25 cents to the wholesale dealers, 50 cents for expense of advertising and commercial travellers: total saved, \$1.50 on each \$2.00 work. We take them directly from the printing rooms, advertise them extensively, and make no charge therefor, relieve the manufacturer from these usual heavy expenses of sale; hence, we buy at low prices, do the work of advertiser, commercial traveller, jobber, and retail dealer free of charge to manufacturers, *mail them free*, expecting to be repaid by an increase of subscribers, and receive the thanks of thousands of our readers for assisting them to beautify their homes with such fine gems of art, at so little or no expense.

"The curfew tolls the knell of parting day," and other lines in the immortal Elegy, are well illustrated in "HOMEWARD," one of the pictures we offer.

This is a universal favorite, and is considered by many, the best work of that distinguished painter, Joseph John,

WHITE BURLEY TOBACCO.—For this new variety of tobacco there has been frequent inquiries, and we have had several interviews with practical planters in Maryland upon the subject. Those who have raised it say that it is rather late and when it cures almost white and they send it to Baltimore, they can get no more, if as much, as for the brighter sorts of Maryland broad leaf thick set. These gentlemen got the seed some two or more years ago from the Agricultural department at Washington. One, has a hogshead now on hand, which, he says, he is sure will be sold for no more per 100 lbs. than the best of his other tobacco. Why is this? Is it that there is in this market no discrimination, or are our Commission Merchant ignorant of the fact that White Burley sells for twice as much as any other tobacco of like color.

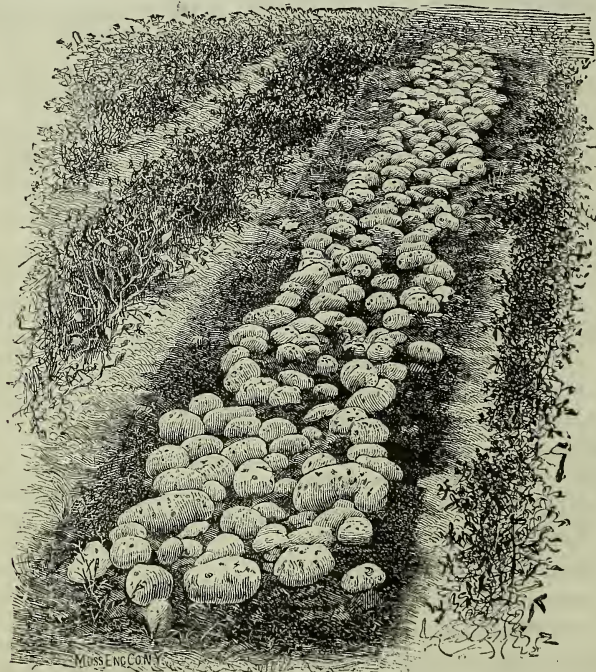
There is a screw loose somewhere and our planters should look to it. If this tobacco on good soil will produce 2000 lbs. per acre, and bring \$20 a hundred, why should not our planters experiment with it? If it is so much more valuable in Virginia than the common sorts, why should not our commission merchants be up to the times and get correspondingly high prices for it? What is the use of our planters trying to grow a new variety of tobacco or anything else, if they can get no more for it, because their merchants are not up to the times in its progressive movement. We again repeat that there is a screw loose somewhere. Progressive planters should look to it. Why confine sales to this market? We have asked these questions, who will answer?

ATTENTION is called to the advertisement of Mr. T. S. Hubbard, which accidentally was left out in our last month's issue. The *Prentiss* grape that he advertises is a new, white grape, that has met with the heartiest approval of experienced growers of the vine, and is said to be the earliest, hardiest and best quality white grape yet introduced.

HORTICULTURAL.

The MAMMOTH PEARL POTATO is a new variety originated in Ohio, and been on the market only three or four years. It was selected from 2,500 seedlings. The aim of the originator we are informed was to obtain a variety that would produce a crop (in spite of the bugs,) of the best table quality, beautiful in appearance, free from rot or any other disease and never hollow, and from the numerous testimonials of gentlemen who have grown it, we think

they come up so strong and grow so fast, that the potato bugs have no chance at all.' If they are planted three and a half feet apart each way, the vines will completely cover every spot of ground, thus keeping the soil moist and protecting the hills from the hot rays of the sun. They ripen in August or the first of September, and can be dug at your leisure; and in the important matter of productiveness it will yield 'double or triple any ordinary kind' and will sell for more in market; in short it is the best, the handsomest, and by far the most productive potato in cultivation, and I defy any person to select its equal in all



he accomplished his object. Mr. J. A. Ev-critt, Watsontown, Pa., to whom we are indebted for the cut herein inserted, thus speaks of it:

"In shape it is oblong and usually a little flattened, very smooth and uniform in shape, eyes even with or slightly raised above the surface, skin pearly white, flesh, the whitest of all varieties; for the table it cooks like a ball of flour, and as white as snow, evenly to the centre. The vines are as Mr. I. F. Tillinghast says, 'without exception the most rampant and strong growing of any variety we have ever grown;

respects from all the varieties grown at the present day."

"The above cut was engraved from a photograph of the product of part of a row of the Mammoth Pearl potatoes. They were grown on ordinary farm land, planted to corn the previous year, and a light coat of barn-yard manure turned under in the Spring. They were dug before the crop was fully matured as can be seen by the rows on both sides. You will also notice that the tubers are all of good size and some are very large,

The above were planted one eye at a place about twelve inches apart, and only machine cultivation given, and no attention whatever was paid to the bugs, while a less strong growing variety planted by the side of them were dusted twice with Paris green and then suffered more from the bugs than these. There were from ten to twenty potatoes on each stalk, all of large or medium size."

Persons who grow potatoes for family use or for market would do well to try this new potato. A bushel or so of seed would certainly repay the cost, and might prove a bonanza.

For the Maryland Farmer,

Horticulture in Maryland up to 1880.

GUILFORD.

Guildford is that elegant and large estate owned by the late Wm. McDonald, about three miles from the city, now owned by Mr. A. S. Abell, proprietor of the Baltimore "*Sun*." On this extensive property is a splendid mansion, surrounded by large forest trees, which also skirt the drive from the entrance gate to the house. Shrubby and evergreens are interspersed along the main walk that leads to the green-houses and the flower beds and borders, all of which are filled with choice plants and flowers. There is also a fine grapery where a fine variety of house grapes are produced. The green-house plants are mostly of the old kinds. Here are found the largest specimens of the white Azalia in this country, some of them 8 to ten feet in diameter. The chief green-house is quite lofty so as to accommodate the tall growing plants and exotic trees. The space devoted to flower decoration is extensive and the grounds are well kept. It is a beautiful place with groves and shaded walks.

Captain Snow, of our most enthusiastic amateur florists, resides not far from Bel-Air, in Harford country. He has several houses devoted to a good collection of plants. His love for horticulture combined with practice and theory, enables him to understand the treatment of most plants. If proficiency is the aim, one must read and labor before he is capable to be a judge

of the true merits of plants, and know how they should best be cultivated. The captain is such an one. His collection of Orchids is very superior; some of them he imported, but most of them he collected during his many visits to the tropics, where he saw them growing in their native climes. Many of them are splendid specimens. Having become familiar with their habits in their homes, he has no difficulty in rearing them and keeping them in fine health and condition. His grounds about the house are occupied with trees, evergreens and flower beds, which present a pretty appearance. He has a fancy for herbaceous plants, of which there are found some choice specimens. There is a fine orchard of pears and other superior fruits. Pears do well in this section. Mr. Snow has everything done under his own direction and seems to take great pleasure in attending assiduously to his own business.

Mr. John Merryman, of Hayfields, Baltimore county, is fond of horticulture, but widely known as an agriculturist, having a fine farm well managed and famous for the large and splendid herd of Hereford cattle which adorns the pastures. The dwelling is a fine large solid structure, with fine shade trees about it. There is a greenhouse for raising the necessary plants for the summer ornamentation of the spaces on the lawn allotted to flowers. This department is entirely under the management of Mrs. Merryman, who delights in flowers and displays great taste in the arrangement and the nice order in which things are kept. This is one of the most noted farms in the State and does credit to the prominent position Mr. Merryman holds in agriculture.

Gov. Carroll, of Howard county, owns the old residence and contiguous estate of his distinguished grandfather, Charles Carroll of Carrollton, whose history is familiar to all Americans. The historic old mansion with its noble forest trees presents a venerable appearance. Fine specimens of evergreens and flowering shrubs and plants on the lawn are numerous. The grass is kept in fine trim and so are the walks, which are laid off in the old style; clumps of flowers and borders of bedding plants present a fine appearance. A large, substantial, double pitched green-house, with all modern appliances has been erected. It is heated by hot-water pipes. The collection therein is not large but choice,

among which are some fine orchids, sent there direct from their native place, comprising such as are novelties and scarce. This being one of the most noted old homesteads of Maryland, its records will be remembered for ages to come.

Mr. Henry Hazlehurst, at Ellicott city, Howard county, has a neat residence quite isolated, though near the railroad, and commands a fine view. Here are many fine flowers and a good collection of plants, among which are some very choice specimens of foliated plants, all under the management of Mrs. Hazlehurst, who is devotedly fond of flowers and who has shown great taste in the arrangement and selection of plants, &c. Some of her best plants have been ruined by the ignorance of gardeners that were employed, because they brought strong recommendations from Northern establishments that wished to sell their plants at high prices. This mistake has been too often made to the detriment of our home florists. People think they must send to a distance for flowers and trees and pay high prices, when better and lower priced articles of the same class can be had of our horticulturists near home. This practice should be avoided in future by persons who wish to improve and beautify their country seats.

Directions for Planting Starwberries

FOR THE GARDEN.—One of the methods is to plant beds about four feet in width, leaving a walk between. Three rows may be planted in each bed set fifteen inches apart each way, the outer row being nine inches from the walk. By this method the beds need never be trodden upon.

RUNNERS.—If large berries are desired, runners should be cut out as they appear during the season. Thus new crowns are formed in the old plants for next year's fruit. Keep the ground clear of weeds and the surface mellow.

MULCHING.—Just before the fruit begins to ripen, cover the ground between the plants and about them with straw or freshly mown grass. This will protect the plants against drought and the fruit from the sand and soil which are spattered over them by rain.

FOR FIELD CULTURE—The matted-row system is generally adopted, as the cultiva-

tor and horse perform the labor. The rows should be not less than four feet apart and the plants 18 inches apart in the row.—*Rural New Yorker.*

THREE year trial proves that two spoonfuls of saltpetre dissolved in a pail of water will save winter squashes from the borer. Apply once a week.

As it takes no more hoeing or weeding to raise first class varieties of garden vegetables, than it does to raise inferior or indifferent ones, every one can see the propriety of choosing the best.

PRESIDENT GARFIELD'S INAUGURAL. We were gratified at the interest manifested by General Garfield toward agriculture in his inaugural address, and with the manly, terse argument used in behalf of its foster-care by the Government when he says:

"The farms of the United States afford homes and employment for more than one-half of our people, and furnish much the largest part of our exports. As the government lights our coasts for the protection of mariners and the benefit of commerce, so it should give to the tillers of the soil, lights of practical science and experience."

ATTENTION! Stock breeders and raisers of poultry should advertise in our columns. Such advertisements would greatly assist us in promptly answering the many enquiries we have for such stock.

MONTGOMERY COUNTY AGRICULTURAL SOCIETY held its Annual Meeting at Rockville, Md., on the 16th February, and elected the following for the current year. President, W. S. Brooke; Vice-Presidents, Col. James A. Boyd, Benjamin C. Gott, Dr. E. E. Stonestreet, Jno. Brady, Wm. Hazell; Executive Committee, Dr. F. Thomas, Geo. R. Rice, Jos. T. Bailey, Jno. H. Gassaway, Jno. E. Willson; Treasurer, W. V. Bouie, Jr.; Secretary, Chas. W. Prettyman.

Rhode Island State Fair will be held at Providence, the last four day in September. Jos. H. Browne, President; Charles W. Smith, Secretary,

POULTRY HOUSE.

PEKIN DUCKS stand at the head of the list in England, as they are more prolific, arrive at maturity at an earlier age, and are hardier than any other variety. This breed has been known outside of China only five years; and is already a rival if not superior to the many favorite varieties long cultivated here and in Europe.

VERMIN upon fowls and pigeons are more injurious in the Winter, when the birds are housed so constantly that they cannot use their own means to abate the nuisance. A quantity of loose, dry dust should be always found in every poultry-house, so that they may take an occasional dust bath, and if these be found not sufficient, drop a little flower of sulphur over the dust, or even if any fowl is found not to do well with this means, rub its head and neck feathers with an ointment made of sulphur and lard.

FRENCH poultry breeders feed their fowls with boiled or steamed carrots, chopped into small pieces. This food rapidly fattens them, and imparts an agreeable flavor to the flesh, greatly relished by epicures, and fowls thus fed sell more rapidly than others. The experiment at least is worth trying here. If spring chickens could thus be increased in weight and savor in a few weeks, both producer and consumer would be benefitted.

A CONECTICUT hen farmer mixes a teaspoonful of cayenne or red pepper with the food for his hens, which causes them to lay more eggs. In six months a flock of twenty-six hens laid 2025 eggs, or an average of 11 1-6 per day. On two occasions when by the omission of pepper the daily product was 9, the use of that spice brought up the number to 13 or more a day. The fowls were fed on cornmeal in the morning and oats at night.

AVOID, if possible, an exclusive diet of whole corn for poultry. It may put on fat but it is not good for eggs. Let corn be fed as only one among other grains.

Fowls Dusting.

No plan we have tried is so good for keeping birds clean and healthy as allowing them a good dust bath. There are various ways of making this, and also different ways of making them take to it. Briefly, it may be said nothing is so good for the purpose as dry powdery ashes, taken from the ash-pit before they have been wet, and put under a cover of some kind to prevent them from becoming so. One bushel or so of dry ashes will do for a dozen or more fowls dusting in for a considerable length of time, and when a little powdered sulphur is shaken over the heap occasionally it makes it sweeter and more effective. There is something too, in the manner of putting down the ashes. We have had dry ashes lying under a dusting shed for a month or more without a bird attempting to take a roll in it, and all for the simple reason that the ashes were spread out level and not laid in a heap. When the same ashes were thrown up into a round mound there was a crowd around it in a short time, scratching, and before long nothing but an intricate rolling mass of hens' tails, wings, heads and feet. It is a curious circumstance, which I dare say many besides myself will have observed, that some fowls have very little inclination to scrape on the level ground, but as soon as an elevation of any loose matter is placed within their reach they go into it with energy, and this always induces fowls which are back ward in dusting to pass through the cleaning process.—*Journal of Horticulture.*

New Publications Received.

BARN PLANS AND OUT-BUILDINGS:—Is the title of a neat volume published by the Orange Judd Company, New York. This valuable work, containing plans for barns, pig-pens, shelters of all sorts, ice houses, poultry houses and a variety of other out-buildings and convenient fixtures for feeding and taking care of stock, suitable to all tastes and pockets, illustrated with 257 engravings in all, with full explanations, should be bought by every one who intends building structures for the comfort of his family, and domestic animals. Its price, only \$1.50, puts it within the means of every land owner. It is a

fund of very useful instruction confined in a small sphere.

FROM Matthew Crawford, Cuyahoga Falls, Ohio, an excellent practical treatise on Strawberry Culture, with a catalogue—Free to all.

THANKS to Mr. John M. Bailey, author of "Book on Ensilage," for his late essay upon Ensilage. It is a strong argument in favor of silos and the general use of Ensilage.

VICKS' Illustrated Monthly for March is a gem.

FISHERS' GRAIN TABLES.—This is a small 200 page book, pocket form, with a ready reckoner, showing how much any number of articles, pounds, yards or bushels will come to, from a quarter of a cent and upwards, also hay tables, interest, wages, rent and board, &c., besides numerous other valuable tables. For the farmer, miller, business man and small traders who are unaccustomed to casting up figures, it is of great use. To see it, is to buy it. Can be had at this office for the low price of 40 cents.

RESULT of Soil Tests, of Commercial Fertilizers and Seeds, for 1881. J. T. Henderson, Commissioner, Atlanta, Ga. This Report is full of valuable facts and is valuable both to the makers of fertilizers and to the purchasers.

THE DAIRY.

Butter Salt.

The salt used is of greater importance than might easily be considered. The usual impurities of salt are chloride and sulphate of lime and chloride and sulphate of magnesia. Lime mixed with fat combines and forms an insoluble white soap. When lime is present in salt, small white specks of soapy substance are formed in the butter, thus injuring its keeping qualities. Magnesia is bitter, and if this is present the flavor is injured, so that it is of the greatest importance to have the purest salt. Unfortunately, our American salt is not of sufficient purity or uniformity for dairy purposes and the best qualities only of Eng-

lish salt should be used. Of these there are two kinds on the market, known as the Ashton and Higgin's Eureka. The latter is fast superseding the former on account of its perfect purity, uniformity of grain, and freedom from objectionable scale. As the difference in price between good and bad is very small, and the difference between good and bad butter is very large, the extra cost of a sack of the best salt may easily be saved upon one pail of butter. A hundred pounds of salt will pack 1,600 pounds of butter, and two to five cents a pound on this quantity may easily be lost by means of bad salt, making a loss of \$30 to \$80, to offset the gain of one dollar or less.—*Henry Stewart in Rural New Yorker.*

Diarrhœa in Calves.

Give, according to size and age, from two to three ounces of castor oil, with a drachm of laudanum. Atter four hours, and as long as necessary, give twice or thrice daily, the following mixture in one doze: Two drachms of compound chalk powder, with opium, one drachm of powdered gentian root, one ounce of peppermint water, and two ounces of starch emulsion. By way of prevention the animal should have milk in small quantities at a time, and it is best to give it mixed with an equal quantity of flaxseed tea, which greatly tends to prevent the milk from souring or curdling in the stomach, which causing irritation, produces the diarrhœa.—*National Live Stock Journal, Chicago.*

Catalogues Received.

WM. PARRY, (*of the Pomona Nursery*), Parry P. O., N. J. His catalogue embraces plants, trees, small fruits and flowers of many choice varieties. His nursery is too well known to need a "bush" in our columns. Mr. Parry's catalogue of small fruits of every sort and of the best varieties, is also received. See advertisement elsewhere in the Farmer.

The prettily printed catalogue of Mr. J. A. EVERITT, Watsonstown, Pa., with a unique and beautifully designed cover has been received. Mr. Everitt makes a specialty of potatoes, of which there are many of the newer varieties illustrated and described in his pamphlet; one of which is mentioned elsewhere in our columns. See his advertisement in this number of the Farmer.

Received from the DINGEE & CONARD Co., West Grove, Chester county, Pa., their handsome

catalogue for 1881. They make a specialty of roses and have an immense number for sale. Among those advertised in our columns are some superb new sorts, at reasonable prices. The illustrations are very fine.

From Mr. JOHN SAUL, Washington, D. C., his large and elegant No. 6 Catalogue of Plants for 1881, and also his descriptive list of choice roses, accompanied with a splendid colored print, illustrating three superb specimens of roses.—Duke of Connaught, Pearl and Beauty of Stapleford. Mr. Saul's extensive and superior collection of flowers, plants, shrubs and trees does credit to the capital of the nation. His facilities are such that he can promptly fill all orders, and our long knowledge of him justifies us in saying that they are attended to with perfect fidelity. Having often, for ourselves, and frequently for others, sent him orders for plants, they were invariably complied with to the entire satisfaction of the purchasers.

Received from ROBT. J. HALLIDAY, Baltimore, Md., his elegant catalogue of rare and beautiful plants, shrubs and flowers. This reliable nursery established over forty years has become very extensive, and is among the best in the State. His green-houses on Pennsylvania avenue, in the city, are a great attraction to visiting strangers, as it is to the residents of the city.

From A. H. NEWMAN, Chicago, Ill. Illustrated Catalogue of Bee Keepers Supplies. Useful for all who have bees, or are interested in that study.

DIED.—Mr. Ambrose B. Curtiss, at his residence in Flint, Mich., on 9th of February last. He was the son of Col. D. S. Curtiss, of Washington City, who is favorably known to our readers from his former connection with the Maryland Farmer, and who still contributes to our paper. The Flint Citizen and other papers, where the deceased had lived, accompanied the sad announcement with eulogistic notices of his life and public services. We deeply sympathize with his father in his sad bereavement, it being the more painful, as he is now left in his old age with only one daughter remaining of all his once large and loving household.

THE SPRING MEETING of the Maryland Jockey Club will be held at Pimlico Course, Tuesday, Wednesday, Thursday and Friday, May 24, 25, 26 and 27. There will be altogether nineteen races run, three of which will be steeple chases, closing the sport on each of the last three days.

For the Maryland Farmer.

Ammonia in Manipulated Fertilizers.

Md. Agl. College, Mar. 15th, 1881.

Mr. Editor:—May I add from observation and experiments, something of interest to the discussion between your esteemed correspondents, Mr. A. P. S., of Rock Hall, and Dr. Lawes, of England, upon the necessity of using ammonia in manipulated fertilizers?

In your June number, Mr. Sharp asked, "Is ammonia necessary for manipulated fertilizers?" Contending that it is not, he dared "any advocate of the ammonia theory to take up the subject," closing with the following plank of his farming platform. "The atmosphere will supply in abundance to all soils in good condition, all the necessary nitrogen, as it does all the carbon, to plants." In August, Dr. Lawes took up the gauntlet. Telling Mr. Sharp that Baron Liebig, forty years ago made similar statements, he admitted that Maryland as well as Europe, had still some advocates of the theory.

By a series of experiments extending over a period of forty years, Dr. Lawes has tested by continuous unmanured wheat crops, the fact that a gradual decline in production follows an actual decline of nitrogen in the soil. Believing that rich, virgin soils contain ammonia stored away for the use of production, the Doctor does not understand why Mr. Sharp should look alone to the atmosphere for his necessary amount, but volunteers the assertion that Mr. Sharp will find his crops diminishing, long before one-fourth of the ammonia in the soil has been exhausted, unless he apply fertilizers containing it.

Still undaunted, in your last number, under the head of "Organic Matter in Fertilizers," Mr. Sharp continues his sharp attack upon all smelling salts, not agreeable, sold for restoring ammonia to the soil.

Before presenting an experiment made upon this farm, let me quote carefully tested facts, of Professor Pendleton, of Georgia, upon this subject in support of the ammonia theory, which has been thoroughly established by such men as Lawes, Gilbert, Johnson, Stockbridge, Pendleton and a host of other great writers in the cause.

The author says: "The importance of nitrogen as a fertilizer, has been demon-

strated by a number of personal experiments, from which we are satisfied of the truth of the following propositions: 1st. That nitrogen is the only organic element exhausted from soils and needed as a fertilizer. 2nd. That ammonia is the quickest and most powerful of all the nitrogenous fertilizers. 3rd. That nitrogen in an organic state, as albuminoids or as dried flesh, is the next best, being converted rapidly into ammonia by putrefactive decay. 4th. That nitric acid in the nitrates is less active and efficient than either of the three; (later experiments put dried flesh first.)

"From experiments recently made, Ritt-hausen concludes that an increase in the nitrogen of the fertilizer applied to plants, will produce an increase in the percentage of nitrogen in the plant as a whole, and in its different parts."

"Herlmstadt found, on the application of different manures, that gluten was increased in wheat, according to the amount of ammonia evolved. Thus without manure, the wheat contained 9.2 of gluten; with barnyard, 12; with stable, 13.7; night soil, 33.14; and dried human urine 35.1 per cent."

Mr. Sharp declares that no organic manures can be effective until reduced to original elements by decay. Professor Pendleton again speaks from his own experiments as follows. "In 1870, we experimented on cotton, with ammonia as a sulphate, also with nitrates and nitrogen in an organized form. As the land was poor, we added to each of the azotized substances, superphosphate of lime and salt, to supply phosphoric acid and chlorine. From rows thirty-five yards long, we obtained the following results:

"Nitrate of Soda, 2 pounds, produced 111 oz. of seed cotton; Sulph. Am., 2 pounds produced 124 oz. of seed cotton; Nit. Soda and Sulph. Am., 1 pound, each, produced 132 oz. of seed cotton; whilst Sulph. Am. and dried flesh, 1 pound of the former to 2 pounds of the latter, produced 144 oz. of seed cotton. This is conclusive that ammonia acts better than nitric acid on cotton. A combination excels either. The dried flesh was tried again in 1873, yielding two-thirds more cotton than an equal amount of mineral substances. This dried flesh was subject to great pressure, until all the water and blood were pressed out to prevent decay—then ground and

applied. It had 12 per cent. of nitrogen. The plants grew off vigorously, the ammoniates beating the nitrates in rapidity of growth. The quick and potent action of the dried flesh leaves us to infer that some peculiar force is brought to bear when its decomposition takes place, other than the mere nutritive effect of nitrogen. Perhaps other elements are eliminated and rendered soluble, as the phosphoric, sulphuric and carbonic acids. Ammonia in fertilizers has also been found to be a solvent. Thus, the silicates, fel-spar, &c. are decomposed by it, and potash made available."

Animal substances are more valuable fertilizers than vegetables, because almost immediately available. They speedily decay and bring other organic substances into active fermentation. Lean beef contains 23 per cent. of animal matter; blood, when dry, contains 21 per cent. All tanyard parings, glue, etc., contain 50 per cent. of carbon, 25 of oxygen, 18 of nitrogen, and 8 of hydrogen. Wool, hair and horn contain much less water, and decay much more slowly, though containing more nitrogen.

Returning to the actual experiment made on a large scale upon this farm in 1879, I wish to say that our farm superintendent having a field of 30 acres in front of the college that had run out of grass, desired to get it in order for re-setting. A member of the Board of Trustees, from the Eastern Shore, in love with the theory of Mr. Sharp, that only mineral elements are needed to restore the demands of a wheat crop, advised and urged the application of Bone Black, said to contain 90 per cent. of phosphate of lime. Six tons were accordingly bought at \$38 per ton. An application of 400 lbs. of this concentrated mineral food was considered a pretty good dressing. There were cut some 280 bushels of wheat, or about 9 bushels per acre, yielding, at 98 cents, considerably less than the cost of production.

If Mr. Sharp's theory be correct, even though no ammonia were present in the soil, the atmosphere ought to have supplied it in abundance. Had there been any or much ammonia in the soil, we might have reaped, as many friends thus misled do, upon tolerably fertile soils, a paying return, but unfortunately our soil had no reserve force and hence the failure.

Having stated the result of this experiment to Professor Levi Stockbridge, of Massachusetts, the author of a formula, which makes ammonia the leading essential in a perfect fertilizer, I recollect his answer in substance was, that some soils may resist for a considerable time the exhaustion by *anti-ammoniacal* executioners, but they must eventually be given to the commons. Last year an ordinary application of ammoniated phosphate upon an adjoining field, gave us twenty bushels of wheat per acre, enough to give our institution flour the whole year.

Most truly yours,

J. D. WARFIELD.

For the Maryland Farmer.

Barb Wire Fencing.

Mr. Editor.—I was surprised to see a statement from a correspondent of the "*Country Gentleman*" copied in your issue for March, that "neither the length or sharpness of wire barbs is near as great as that of osage orange thorns." I have an old osage hedge around a portion of my farm, and in twelve years have never known an animal injured in the least by the thorns.

On the other hand, we saw, not long since, a statement from a veterinary surgeon that he had seen a fine colt killed, and several horses seriously injured by these barb wire fences. Last summer, a mule belonging to me, managed one night to escape from his stable and ran against one of these barbed fences; a terrible gash in the neck, and another very bad one on the leg was the result, both requiring to be sowed up and preventing the use of the animal for two weeks. These fences are not without danger, while they are very useful, particularly where timber is scarce. Could not a wire be made effective without the barb, by making it larger and securing it well to each post? The cost would be of course somewhat greater.

Respectfully,

Henrico Co., Va. TH. POLLARD.

P. S. I read your interesting and ably conducted journal with much interest and wish you abundant success. Truly,

TH. POLLARD.

[We thank our esteemed correspondent for his appreciation of our journal. We

differ with him in his opinion of the danger of Barb Wire Fences. We know of one case where a mule in trying to get over an osage hedge, was severely lacerated and made unable to work for some days. Accidents do sometimes occur with the barbed wire, but not often. Such an argument would be equally strong against the use of railroads, steamboats, and also against common rail or plank fences. We have known serious results from horses and cattle being snagged by jumping over or running against a rail fence. If these barbed wires were very dangerous they would not have become so popular. We have yet to learn from the first man who has tried them and then abandoned their use because they proved dangerous to stock. Notwithstanding the unfrequent publication of isolated cases, like the one stated by our friend, the demand for barb wire has increased lately to an incredible extent. Where timber is scarce it has proven a God-send. Millions of fine growing trees are yearly sacrificed to build fences that perish within ten or twenty years. The wire is more durable and less expensive, and saves millions of feet of timber per year. We confess to a firm confidence in the value, economy, effectiveness and utility of well built barbed wire fences. EDS. MD. FAR.]

MARYLAND POULTRY CLUB.—The following are the officers elected. George Colton, President; Wm. T. P. Turpin, of Centreville, Md., first Vice-president; J. Baughman, of Baltimore county, second Vice-president; Geo. O. Brown, Secretary and Treasurer; T. B. Dorsey, Assistant Secretary, and T. W. Hooper, Dr. Geo. H. Cairnes and F. A. Rommel, executive committee. The membership will be limited, and members hereafter will be ballotted for. It will hold its first exhibition in December or January next, when the American Poultry Association will probably convene with the new organization.

LADIES' DEPARTMENT.

Chats with the Ladies for April.

BY PATUXENT PLANTER.

RAINY DAYS.

"The spring day rose from her sleeping
In the deep, dim caverns of mist,
With the waiting world to be keeping
Her brief and beautiful tryst;
But her sweet eyes opened weeping,
As the sunshine her pale lips kissed,
And thus she rose from her sleeping
In the caverns of eastern mist.

"The world had dreamed of the meeting,
From the first of the farthest years;
But her hand was cold to his greeting,
And her cheeks were bitter with tears.
Her voice was the wind, repeating
The pain of the heart that hears;
But the world was glad of the meeting
To the last of the lingering years.

"For forth from her tears came flowers,
And out of her grief, delight,
And the buds swelled under the showers;
And blossoms, with sandals white
Climbed up to their forest bowers
From the broken seeds and night,
But who could foretell the flowers,
Or see in the grief, delight."

As the poetess above quoted justly and poetically says, we are now in April, whose showers will bring blossoms and flowers and fruit from the seeds and trees that stern winter has so long held in cruel bondage and oppressed with icy fetters. The tears of mild, beautiful Spring has burst the imposed fetters and softened the tyrant heart of winter, and again the denizens of the forest and glade, and hillside and dale will come forth and be gay and bright once more to gladden our hearts, and renew our spirits, and rejuvenate our love for flowers and all the opening beauties of Spring.

This month expects every woman who delights in having out-door plants, to provide for the same by a timely preparation of borders and beds for the annuals and other seeds, to be sown in their proper order as to season; and to be ready for the

reception of bedding-out plants. A little trouble and time, with but little expense will secure these receptacles for your pets, that are all summer and autumn to be creatures of pleasure to yourself and delight to your friends. Have the borders and beds, if not already in good soil, dug out six or eight inches and the clay or poor earth removed. Dig the sub-soil deep, enriching it with well rotted manure from barnyard. Then fill to the top, or two inches above with a good compost made of equal parts of rotted sods, or wood's earth, road dust, or street scrapings and well rotted cow or horse manure. All well mixed with a small quantity of salt, ashes and slaked lime. After standing a few days and being well raked, seeds may be sown or plants set out, and you may feel assured that you have prepared a proper home for the darlings. Of course you will exercise your own taste and judgment in the selection of seeds and plants. I only give you my own suggestions as to some that I think should be seen in every flower garden:

Flowers—Verbenas, new snap-dragons, asters, balsams, canna, cockscomb, delphiniums, dianthus, lupins, mignonette, petunia, phlox drummundii, portulaca, salvia, zinnia.

Climbers—Ipomeas, convolvulus, cobeas scandens, thumbergia, and nasturtium, which is both useful and ornamental.

Have several of the grasses, they always are pretty, whether as growing plants or for winter ornaments.

For Perennials—have Canterbury bells, hollyhocks, pinks, perennial peas, sweet William, dahlias, tuberose, &c.

Bedding-out Plants—from the greenhouse, suit your taste, but have plenty of geraniums, lantanas, &c., and an oleander, crape myrtle, heliotropes.

Hardy Climbers—None are better than celastrus, clematis, particularly clematis Jackmanii, wistaria, &c.

Hardy Bulbs and Plants—Altheas, dicentra, honeysuckles, new hydrangeas, deutzias, daisies, lilies of all sorts, peony, spiraea, roses in quantities, yucca and yain, the last both useful and a pretty flowering climber.

Every year you should aim to set out

Gladiolus, you cannot well have too many, some of the varieties are beautiful. Try and raise seedlings each year from the little bulbs attached to the large bulb. The second year, or third, they bloom and sometimes prove to be of a fine variety.

If you wish amusement and pleasure that will yield you profit and comforts in housekeeping, have a well ordered poultry yard, a few bee-hives of improved styles and with Italian queens, also a dove-cote well stocked with common as well as fancy pigeons, and if possible, provide yourself with a small, carp pond. The last is becoming fashionable, and by many considered indispensable to the perfectness of a well managed country place. The valuable uses and pleasures of a well established fish pond on one's own grounds are too apparent to need words of explanation, while actual experience of many, prove that it is attended with but small cost, which in a few years will be repaid tenfold in actual money value. It is an investment that will pay large dividends in money, besides affording infinite pleasure.

Ladies, why will you allow me to talk all? Why will you not contribute monthly your experiences or theories, which will be much better said, and so much more prized by our readers than what I can say. Give us your practices in house-keeping and tell us about your daily employments and amusements, that we can all be improved thereby, and have our views enlarged and our lives made happier by such information.

LIVE STOCK REGISTER.

Sheep Husbandry.

Docking and Castrating.

We have been requested by a practical planter, of Maryland, to tell him how he can with most safety, dock and castrate his lambs, having suffered much loss in practicing the latter process. We can do nothing better than draw information again from Professor Killebrew's excellent work on sheep.

"This process—DOCKING—should take place when the lamb is a week or ten days old, or older if it is very weak. Some cut off the tail with a knife, while others use a chisel. The latter is much the best plan.

Let an attendant hold it upright, rather leaning back, with its rump resting on a block; then, with the finger and thumb, let the skin of the tail be drawn up towards the root, and placing a chisel on the tail about an inch from the rump, strike it a smart blow with a mallet and sever it at one blow. Have at hand a pot of tar, turpentine and lard, and smear the stump with it and turn it off. There will be little or no bleeding, especially if the operation is performed about night, so the lamb will be quiet soon after docking.

"CASTRATION should be performed about the same time. The longer this is delayed the more liable the lamb is to die. I have known every lamb to die from this operation being delayed until shearing time. This is a delicate operation and must be carefully performed. A cool day should be selected and gentle hands to assist. Take the lamb with a fore and hind leg in each hand, and hold in an upright position with the back against the body; draw the hind legs up and apart, and press the lamb's body sufficiently hard to cause its belly to protrude between the thighs, exposing the scrotum to full view; then, with a sharp knife, cut about two-thirds of the scrotum off, and take each testicle in turn, between the thumb and forefinger, and after sliding down the loose enveloping membrane to the spermatic cord, pull out, not jerk, the testicle with a moderately quick but not violently jerking motion. The connecting tissues easily break, with but little bleeding. If any of the nerve should remain exposed pull out and cut it off, as it must not be left. After cutting, place a quantity of the tar and grease in the scrotum and all over it, to keep off flies, and it will quickly heal. This operation should also be performed just at nightfall, to ensure quiet until it begins to inflame. Formerly, castration was practiced far more than at present, and we think it better for the farmer to sell the buck lambs instead of converting them into wethers, as with the most careful operation many lambs will die."

Every man's sheep should be distinctly marked. In this connection we call attention to what the Professor says about

MARKING.

"The old, barbarous custom of mutilating the ears of sheep has given place to other plans. Cutting the ear destroys the beauty of the sheep, besides injuring their

facility to hear, the ear being shaped precisely right to convey sounds to the drum. Some use tags of tin, sold by all agricultural stores, that have marked upon them, the age and number of the sheep. This tag is placed in the lobe of the ear as an ear-bob. Both ends may pierce the ear, and then by bending and twisting it is permanently fastened. Others use paint. A convenient method is to use lampblack or any other color with linseed oil, and with a brush, make any shaped marks proper or desired, either the initials of the owner or a cross. Bucks should be marked on the rump, wethers on the right shoulder and ewes on the left. Another plan is to use Venetian red a very cheap paint, and one pound will mark a thousand sheep. Take between the thumb and first two fingers, a pinch of the dry powder, then, drawing the enclosing fingers through the wool, letting the powder slip, any desirable mark may be made. The powder will unite with the grease of the wool, making a bright red mark, which no amount of rain will efface, yet without any injury to the wool, as it can be easily taken out by the manufacturer, which is not so easily done with lampblack and linseed oil. However, this operation should always take place immediately after shearing, except as to lambs; on the latter after docking."

Our Pigs too Fat.

The following from the New York *Tribune* is very much to the point:

"Mere blubber is not desirable food in our climate. As pigs are now bred and fattened they are little more than animate lard. Everybody has been trying for years to see how fat they could make them weigh in the shortest possible time. This universal system of stuffing has resulted in breeding out muscle, (lean meat) and thickening up the fatty portions. Pigs are confined in close quarters, and are stuffed to the very verge of breaking down of their digestive function and often beyond it. In the latter case they are speedily slaughtered before they run down. Usually pigs are confined in foul pens where they are obliged to lie in their filth, and breathe air poisonous with the fumes of decay. The whole system is wrong, resulting in distasteful if not unwholesome food."

The half is not here said that ought to

be. We never taste a Western canvass ham, let it come ever so loudly bepraised, that we do not ask in wonder, "what on earth do packers do to this meat to so completely ruin it for human food?" Soon people will come to their senses and throw this miserable stuff to the dogs. No hog that weighs over 180 or 200 pounds should ever furnish a ham for a Christian's stomach.

What is said of Hereford Cattle.

The *Mark Lane Express* says—"There are few graziers in England who would buy Short horn bullocks, if they could get Herefords."

The *Kentucky Live Stock Record* says—"That five Hereford bullocks, three years old or over, could be fed where four Short-horns bullocks could."

The *National Live Stock Journal* says—"Breeder of Short-horn cattle may not safely shut their eyes against the fact that the Herefords have made tremendous strides in public favor within the past five years, and that such of our ranchmen on the Western plains, as have tried them, almost unanimously give them the preference over Short-horns, because, as they express it, they are 'better wrestlers'—that is, they are better adapted to the conditions under which cattle are compelled to exist on these plains than are the Short-horns. This, we feel called upon to say is the almost universal verdict of the ranchmen that we have met in the past two years, and we have met very many of them."

WHAT CONSTITUTES A GRADE—Custom makes the only rule in such cases, and custom does not designate a cross between two distinct breeds as a grade, but rather as a cross-bred beast. When one of the progenitors is of a pure breed, and the other is of mixed origin, the custom is to designate such an animal as a grade Short-horn, grade Hereford, grade Berkshire, etc., taking the name of the breed to which the pure bred ancestor belongs.—*National Live Stock Journal*.

HAVING been cured by St. Jacob's Oil, I recommend the same to all sufferers with rheumatism, says Mr. L. Shiffman, 2304 Calumet Avenue, Chicago, Ill. *La Crosse Republican Leader*,

The Channel Islands Cattle—Jerseys, Guernseys and Alderneys.

The Channel Islands—Jersey, Guernsey and Alderney—situated in the English Channel, between Great Britain and France, have a race of cattle that have attained great popularity among dairymen, mainly on account of the quality of the milk, which is especially rich in cream. Of these Channel Islands cattle the Jersey is considered the typical race—at least it has attained the greatest popularity, and has been most widely disseminated—but they all show unmistakeable evidences of a common origin. When first introduced into this country, they were all called Alderneys, no matter whether from Guernsey, Jersey or Alderney; but as the cattle of each Island are kept distinct, and no crossing between them is permitted, we have ceased to give them this general appellation, although the difference between the Alderneys and the Jerseys is so slight as not to be worth mentioning. They are famed for the large percentage of cream which the milk affords, and for its rich, golden color, and are especially desirable as family cows to furnish cream and butter for table use.

The Jerseys are the most numerous, as Jersey is much the largest island of the group—larger indeed than all the others combined. The Guernsey cattle are larger and perhaps coarser than the Jerseys; and it is claimed that while they are equally as desirable as the latter, with regard to the quantity and quality of the cream and milk, they fatten off more readily, and are more valuable for beef. On this account it is urged that they are better than the cattle of Jersey and Alderney for the general farmer, for dairy purposes, or for crossing upon other stock. On the other hand the breeders of Jersey cattle claim superiority for this breed over all others in the quality of milk and cream, and in the purity of the breed. The cattle of Alderney are as a class, said to be smaller and more delicate than those of Jersey and Guernsey.

The Jerseys are the only Channel Islands cattle that will make much show at the fairs. They are small animals, with beautiful, deer-like heads. In color they are silver-grey, light or dark fawn, light or dark brown pale red, with more or less markings of white sometimes occurring with all the above colors; but a "solid" color, with

black nose and switch are considered desirable.—*National Live Stock Journal, Chicago.*

For the Maryland Farmer.

Sheep Breeding.

BY D. Z. EVANS, JR.

There is scarcely any other branch or department of live stock breeding that pays as well as sheep breeding, when properly managed, and it seems strange that more of our farmers do not give it at least a fair trial. Especially are sheep desirable on a poor farm, for they will materially assist in increasing the fertility of the land, in the hands of an intelligent and practical man.

No other live stock will return the profits so soon and so regularly as will sheep, and the per centage of profit cannot help but prove entirely satisfactory under fairly favorable circumstances, for not only are there lambs to sell, at good prices every Spring, but there is quite a supply of wool over season to still further swell the profits, while the average cost of keeping them is comparatively slight. It is, however, poor economy to feed poorly, for high and regular feeding always pays best, especially with sheep, telling very perceptibly in both the meat and the wool. Irregular and poor feeding impairs not merely the quantity of wool, but it injures its quality and value by producing a fibre which is of varying degrees of fineness and with frequent knots, thus spoiling it for manufacturing the best quality of goods. An examination of a few samples of wool with an ordinary microscope will explain this matter more fully than we can here.

On lands but a few miles from our large cities, it seldom pays to breed sheep; or in fact, any kind of live stock for profit, for such lands are far more valuable for raising early vegetables. There are hundreds of acres of comparatively good and cheap lands in Maryland and Virginia, which are but a few hours, by rail or boat, from most of our large cities, and these can be made to pay well with sheep, raising early lambs for the market. It requires some capital as well as experience, and those who attempt it without either, will fail to make a profit.

Good native ewes crossed with a pure bred South-down or Cotswold ram will pro-

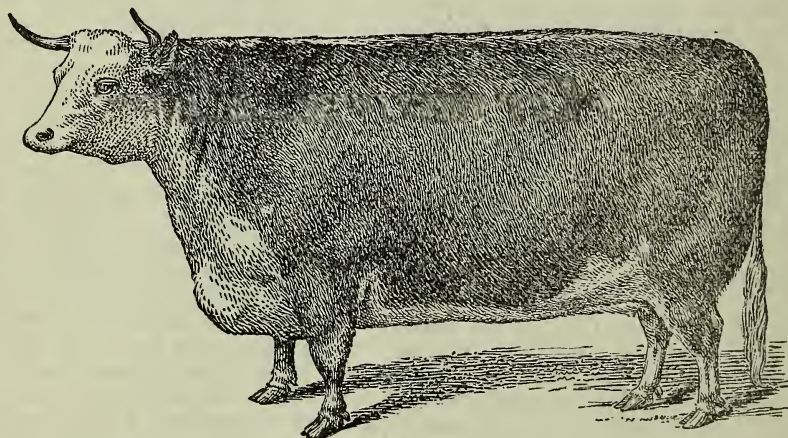
duce a class of lambs which are sure to please any judge of good stock, and the quality of such lamb is duly appreciated by consumers. Those who wish to breed sheep, and have had very little, if any experience, will find it best to commence with a very small flock of from ten to twenty, and then increase the number as the experience and cash increases, until you have as many as you wish, or as the farm is capable of carrying.

Hereford Cow, Maid of Orleans.

The hereford cow, "Maid of Orleans," that won, but did not take the sweepstake as the best fat cow at the late Fat Stock Show, at Chicago, was dressed at Detroit for Christmas beef. She was butchered in

aroma to them, that please the recipient, and all others breeding the same kind of stock. They do not then need to refer back to some old Encyclopædia Britannica, that smells of must, and the writers of which, even if they knew a steer when they saw one, are not here to buy them, to find out the relative qualities of the Herefords and Short-horns. What comfort is it to a man to be told that Short-horns have been the leading breed for fifty years, and so of course they must be the best, unless the men who are buying our fat steers and fat cows, out with their pocket-books and pay more for our Short-horn steers than they will for our Herefords.

We are men of to-day, and a fresh, inspiring letter like the one following, written in the present year of 1881, has a more



the market and hung up entire, so it was impossible to weigh her until she was quartered and cut down. She was cut down January 28, and below we give our readers a letter to T. L. Miller, from Wm. Smith & Son, who are one of the oldest and most reliable firm of butchers in the country, and their exhibit of Christmas beef was the largest and best made in the United States.

As will be seen from the figures given in their letter, the heifer dressed 70.48 per cent. of meat.

It is facts like these that give the Hereford breed of cattle their great popularity; and breeders and feeders like to get such letters from butchers, whose block is after all, the true criterion to judge any breed of beef cattle by. Letters like these, that say "We want Hereford beef cattle in preference to all others," have a freshness and an

convincing weight that the Herefords are the best cattle, than volumes of Short-horn talk about the past excellencies of that breed.

LETTER.

DETROIT, MICH., Jan. 29, 1881.

Dear Sir—We cut the heifer down yesterday, after hanging thirty-six days. She weighed as follows:

One hind-quarter.....	273lbs.
One hind-quarter.....	276lbs.
One fore-quarter.....	285lbs.
One fore-quarter.....	289lbs.

1,123lbs.

All the butchers in our market agree with us that the carcass must have shrunk at least 40 lbs. This would make 1,163 lbs., the most wonderful exhibit we have ever seen. She weighed alive the morning she was killed, 1,650 lbs. She cuts up well,

but not so well as the steers, she being very much fatter than they. Her lean meat is the tenderest and most juicy we ever saw.

After a careful examination into the merits of the different animals slaughtered by us for Christmas, we consider the Herefords far ahead of any of the other breeds for quality and profit to the butcher and consumer.

We are very much elated with the success of our show this year, and our intentions are to increase it next year. We will try to buy all your fat cattle next fall. Please let us know when you are ready to sell.

Very truly yours,

WM. SMITH & SON.

T. L. MILLER, ESQ., Beecher, Ill.

HOW MUCH PORK TO A BUSHEL OF CORN.—Among the questions discussed at the last meeting of the Iowa Stock Breeders Association, was the oft mooted one of the number of pounds of pork that may be produced from a given quantity of corn. Mr. Briggs, of Jasper, said it was claimed, that one bushel of corn would produce ten pounds of pork, but he claimed that under most circumstances it would not produce five pounds to the bushel, while in other cases fifteen to eighteen might be produced. Mr. Nichols, of Muscatine, also gave his experience on this question. He had produced as high as twelve pounds of pork from a bushel of corn. Mr. Brown, of Marshall, stated that he had obtained nine pounds of pork to the bushel, and as high as ten, when hogs were on grass. Mr. Lathrop, of Johnson, was of the opinion, that in the condensing process more pork could be obtained for a bushel of corn in young hogs than in older ones, and the same would also be the case in cattle. Mr. Hiatt, of Jasper county, was of the opinion that not more than five pounds of pork could be produced from a bushel of corn, and believed in selling corn in preference to feeding it, when he could get thirty cents per bushel.—*National Live Stock Journal, Chicago.*

We call attention to the advertisement of Mr. J. Q. A. Holloway. He is at present, the oldest manufacturer of manipulated fertilizers, of this city, and well known throughout the country as one of the most reliable merchants engaged in that large business.

The Baltimore Chemical and Fertilizer Exchange.

A Chemical and Fertilizer Exchange has lately been organized in Baltimore city, by the election of Mr. R. W. L. Raisin, president; Wm. Morris Orem, vice-president; Wm. S. Powell, treasurer; and A. de Ghequier, secretary. Mr. Raisin, in accepting the position made an able address, setting forth the objects of the exchange, and gave many interesting statistics going to show the magnitude of the interests involved, and the immense importance of this branch of manufacture and trade to the farming interests of the whole country. The growth of these great interests has been marvelous, in the last quarter of a century. The farmers of the country have spent millions of dollars, annually, in the purchase of chemicals and manipulated fertilizers, to increase their crops and restore impoverished soils.

The general prosperity of the country has excited a great demand for fertilizers of every kind, as for example, the demand for South Carolina phosphate rock, which almost entirely ceased in the fall of 1879, has now grown to 200,000 tons a year, and the price has advanced from \$5 to \$8 and \$9 a ton; and such has correspondingly been the experience of all the other leading descriptions of manufactured manures. We have only room for some extracts from the excellent address of Mr. Raisin, referred to above, and give them for the benefit of our readers, feeling sure they will be read with great interest by our farmers.

"The organization of this exchange is the first movement of asserting ourselves in a corporate way, and bringing before the public a branch of commerce and manufacture, the steady growth and importance of which are measured only by the course of time.

"I might call your attention to the fact, that the business in which we are engaged is the foundation of the prosperity of the

future of this country; for large crops as we all know, form the basis on which commerce and industry, and all the large interests of the country rest, and without which they cannot thrive. Directly or indirectly, it is our particular branch of business which restores to the soil the fertility which insures to the farmer a fair return for his labor in cultivating the ground in the way of an abundant crop. At present the truth, "no guano, no cotton," seems more or less confined to the Southern States; but the day is not far distant when the rich, virgin soils of the West and North-west will be exhausted, and generalize the words into 'No fertilizer, no crop.'

"Hundreds of thousands of dollars are spent by our trade every year, in marine and railroad freights. The fertilizing trade builds up and makes roads paying, by giving them hundreds of thousands of tons of manufactured guano to carry to all parts of the land, and by securing them as freight, the enormously increased produce of the soil, due to the application of prepared manures. We utilize, moreover, in our manufacturing, that, which up to the time of a fuller development of agricultural chemistry had been valueless and waste. The apparently most worthless article acquires value in our eyes, and is by proper manipulation converted into a source of prosperity.

"It is now a quarter of a century since I entered the guano and fertilizer business. At that time Prof. Mapes, of New York; Mr. Davison and Dr. Chappell, of this city, had conceived the idea of manufacturing concentrated fertilizers, but no machinery was then used for this purpose. Not until about 1856 or 1857, did Mr. John Kettlewell, occupying the position of naval officer in our custom house, and a man of advanced views, seized the idea of grinding and mixing ammoniated and phosphatic guanos, associated with himself Mr. John S. Reese, under the firm name of John S. Reese & Co., and erected the first factory for the preparation of fertilizers, equipped with suitable machinery. They were soon followed by others, and with the exception of the years of the late war between North and South, when business in this—our line—was almost at a standstill, the business has been increasing with rapid strides. Not only here in Baltimore, but from Portland, Maine, to New Orleans, immense factories

have sprung up, fitted out with the most complete machinery; utilizing the best talent of the age in agricultural chemistry; employing thousands of laborers, and producing thousands and thousands of tons of fertilizers to enrich the numberless acres of impoverished soil, which, but for its use, would have been abandoned.

"In Baltimore this particular trade has been organized, and to-day the twenty odd complete, large factories, of which the city may well feel proud, testify that Baltimore still holds the foremost rank in this business. It is, therefore, but proper that we should now advance one step farther and meet the necessities of the trade, by organizing the 'Chemical Fertilizer Exchange of Baltimore city,'—an exchange where we can meet and exchange ideas, and express views, and make such suggestions and adopt such rules and regulations as may be necessary for the further development, improvement and proper conduct of our large business interests.

"While it is true that we have large deposits of phosphates in the United States, it is no less true that most of the ingredients we use are imported and handled by members of this new association. From Sicily we receive sulphur; from Peru, nitrate of soda; from the West Indies, Navassa and Mexican Guano; from Germany, the various salts of potash and magnesia; and all these materials enter largely into the manufacture of concentrated fertilizers.

"One member of this exchange imported as I am informed, no less than 29,000 tons last year, of these salts, and when the secretary of the exchange will have had time to prepare proper statistics of our trade in all its branches, that report will astonish, I am sure, ourselves; for it will show the enormous amount of material and money our business engages. Numbers of vessels can be seen daily at our wharves, either discharging cargoes of material, or being dispatched loaded with fertilizers to other ports."

We shall revert to this subject in our next number and give such statistics of this important trade in Baltimore city as we can obtain.

Maryland is under good veterinary inspection, and reported in a healthy condition as far as cattle disease is concerned.

Domestic Recipes.

CHOCOLATE CARAMELS.—Take of grated chocolate, milk, molasses and sugar, each, one cupful, and a piece of butter the size of an egg; boil until it will harden when dropped into cold water, add vanilla, put in a buttered pan, and before it cools, mark off in square blocks.

STEWED CELERY.—It is not everybody who likes raw celery, and some cannot eat it for want of good teeth. It is sometimes dressed as a salad, cut up into what may be called splints. We all know how fine it is when it helps to make a chicken salad. Still, there are many who prefer it stewed. It is first split and tied in little bunches, the same as asparagus, and boiled, then dressed with pepper, salt, butter, and some use a little onion. In fact, it should be prepared very much as oyster-plant is stewed and prepared. When well done it is an excellent dish, and when once accustomed to it, generally preferred to any other form.

CLAM FRITTERS.—Fifty medium sized clams, drained in a collander, then chopped fine; add to that five eggs, well beaten; pepper, little salt, one large tablespoonful flour; drop in hot fat in a frying-pan; serve immediately.

CLAM SOUP.—Put the clam juice over the fire, skim when it boils up; chop twenty-five clams very fine; add a large tablespoonful of butter; heaping teaspoonful of corn starch dissolved in cup of water; heat one pint of milk and pour in after taking it off the fire.

NOTHING ON EARTH SO GOOD.—Certainly a strong opinion, said one of our reporters, to whom the following was detailed by Mr. Henry Kaschop, with Mr. Geo. E. Miller, 418 Main Street, this city. I suffered so badly with rheumatism in my leg, last winter, that I was unable to attend to my work, being completely helpless. I heard of St. Jacob's Oil and bought a bottle, after using which I felt greatly relieved. With the use of the second bottle I was completely cured. In my estimation there is nothing on earth so good for rheumatism as St. Jacob's Oil. It acts like a charm. *Worcester Spy, Mass.*

GRAY HAIRS are honorable, but their premature appearance is annoying. Parker's Hair Balsam is popular for cleanliness and promptly restoring the youthful color.

For the Maryland Farmer.

"SPRING."

BY L. A. COGHILL.

The Spring is here with lovely flowers,
Soon on the budding trees
Will leaves unfold to April showers,
And tremble in the breeze.

The wild geese now have all gone north,
We've heard their last "cohong,"
And little birds are warbling forth
Their notes of joyous song.

The maples, with their scarlet bloom
Of various shades we see,
And quivers now the downy plume
Upon the aspen tree.

And there's the little arbutus,
How lovely to behold!
It seems as if it would for us
To see its leaves unfold.

See too, the modest violet,
With petals white and blue;
How beautiful! at morn, when wet
And sparkling with the dew.

And how the field lark blithely sings,
Perched high upon yon' tree.
See now it spreads its yellow wings
And sails across the lea.

Bob White is whistling to his mate
And tells her, Spring has come,
And in the woods at evening, late,
Is heard the pheasant's drum.

And way down in the miry bogs
A chiming sound we hear,
The croaking of a thousand frogs,
That tell us Spring is here.

Behind the plowman, on the ground
Where he has turned the sod,
Is Robin red-breast hopping round
And peeping 'neath a clod.

He's looking for a worm or two
On which he'll dine to-day,
And now, that he has found a few,
Content, he flies away.

Hark! listen to that plaintive tone
Come from the turtle dove.
It sings as if it were alone
And mourning for its love.

At evening, now, the western sky
Is filled with streaks of red.
And flocks of red wing black birds fly
Like clouds high over head.

Soon will the trees be clothed with green,
How lovely, then, when Spring
In all its beauty shall be seen,
And birds are heard to sing,

The birds, the trees and flowers proclaim
That there is One above
Who rules the seasons, and whose name
Should fill our hearts with love.

KING GEORGE CO., VA., March 16th, 1881.

FOR SALE AT OFFICE OF "MARYLAND FARMER."—The revised and enlarged edition of "Scribner's Lumber and Log Book," a valuable work for lumber merchants, ship and boat builders, and all persons dealing in timber, either buying or selling. It gives correct measurements for boards, scantling and all sorts of timber, contents of logs, etc. Price only 35 cents.

THE ATLANTA COTTON EXHIBITION—Will be held in Atlanta, Ga., in October next. It will be an extensive affair, intended to embrace all implements or machinery for the cultivation, handling and manufacturing of cotton. Our fellow-citizen, R. W. L. Raisin, Esq., is one of the vice-presidents.

THE attention of all who intend planting trees or small fruits this season, is called to the advertisement in this number, of W. M. Peters. Besides his general stock, he has a select list of popular Southern keeping apples, well calculated to supply such a want.

THE Advertisement of NOAH WALKER'S CLOTHING HOUSE will be found in our advertising pages. This old, popular house has been at the head of the clothing business in Baltimore for the past forty years, and our readers need not look elsewhere for reliable goods in their line, at reasonable prices.

DEFIANCE ASPARAGUS.—A new variety will be seen, is advertised by A. Smalley. It is claimed that it grows much larger than the "Conover Colossal," and is earlier and of fine flavor. A few plants can be had at this office at \$1.00 per dozen.

THE CHICAGO SCALES CO.'s advertisement will be more full in our next number. Some of the illustrations of the different scales arrived too late for this issue of the Farmer. Those who may want scales from \$3.00 and upwards, should wait to see our May number.

SAMPLES of the Sedgwick Bros. Wire Gates can be seen at this office.

THE attention of our readers is called to the advertisement in another column, of Mr. A. H. REID, of Philadelphia. Mr. Reid has for several years devoted himself to the introduction of labor-saving machinery about the dairy, and to him is due the credit for several improvements in that line.

A SMOOTH COMPLEXION can be had by every lady will use Parker's Ginger Tonic. For promptly regulating the liver and kidneys, and purifying the blood, there is nothing like it, and this is the reason why it so quickly removes pimples and gives a rosy bloom to the cheek. See notice.

LIQUID OR DRY.—Some people prefer to purchase medicines in the dry state, so that they can see for themselves that they are purely vegetable. Others have not the time or desire to prepare the medicine, and wish it already to use.

To accommodate each class the proprietors of Kidney-Wort now offer that well known remedy in both liquid and dry forms. Sold by druggists everywhere.—*Truth.*

THE DOCTORS DISAGREE as to the best methods and remedies for the cure of constipation and disordered liver and kidneys. But those that have used Kidney Wort, agree that it is by far the best medicine known. Its action is prompt, thorough and lasting. Don't take pills and other mercurials that poison the system, but by using Kidney Wort restore the natural action of all the organs.—*New Covenant.*

ANOTHER TRIUMPH.—The public is greatly indebted to the enterprising firm of Marchal & Smith for the beauty, perfection, purity and economy of that most popular of all musical instruments—the organ—and now the debt is increased by the perfection of an organ which combines the beauty of artistic design, exquisite finish, beautiful tone, great power and endless variety, with an economy in price which brings it within the reach of all. Our readers cannot fail to see the great advantages offered by Messrs. Marchal & Smith.

Fearless Threshing Machine.

We call the attention of farmers and threshermen to the advertisement of the celebrated Fearless Threshing Machine, elsewhere in this paper. Unparalleled honors have been bestowed upon this machine, at fairs and exhibitions, State, National and International; and, if universal victory at trials is evidence of superiority, then most assuredly was an ex-President of the New York State Agricultural Society correct, in saying of the Harder Machines, "they are the best ever made." And, as equally good and reliable testimony has been borne times without number, persons designing to purchase will do well to consult the manufacturer of the Fearless, Minard Harder, Cobleskill, N.Y.